Lectures
ON THE
PHYSIOLOGY AND PATHOLOGY OF BLOOD DESTRUCTION.

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LECTURE I.—(*Concluded.*)

THE SPLEEN.

THE second organ in which blood pigment (independently of extravasation or congestion) is to be found is the spleen.

In Health.—I show now sections from the spleen of normal rabbits, and I ask you to note how very little pigment is present. Scarcely a trace of the iron reaction can be developed in them. This is the case with the spleens of young healthy mammals generally. The amount of pigment they contain is, according to my observations, exceedingly small. In birds, as you will see from the sections I now show you from the pigeon and duck, it is present in much larger amount. As age advances it tends to increase. The spleen in dogs, rabbits, guinea-pigs, either aged or kept long in confinement, I have usually found to contain a considerable, sometimes a large, amount of pigment. The pigment lies in the pulp of the spleen, and is contained within its cells. It is present in various forms, partly as large granules, partly as smaller granules, and partly diffused, apparently in soluble form, throughout the substance of the cell. The large splenic cells are its chief seat; in certain cases they may be seen packed full with it.

In Disease.—Few organs of the body—not even the liver—present, it might be supposed, such favourable conditions for accumulation of pigment as the spleen; and it might naturally be thought that disease would furnish many examples where the amount would be greatly increased. Such is not the case, however, so far as my observations go—and I have examined the spleen in almost every kind of disease in this special relation. On the contrary, apart from old age or prolonged inanition, and not even excluding them, I know of hardly any condition—an exception being malaria—in which any accumulation of pigment at all comparable with that I have shown you, for example, in the case of the liver in pernicious anæmia, is ever to be found in the spleen. Such an increase, however, may be induced experimentally. (Experiments 1 to 16.) I show you now sections of spleens after transfusion of blood in rabbits, and ask you to note the very great abundance of pigment present—so much so that the whole appearance of the pulp in which it lies is transformed. Although seldom so great or striking as that induced by transfusion, a large increase in the pigment of the spleen may also, I find, be induced by other experimental means. I show you now sections from the spleens of the dog (Experiment 63) and rabbit (Experiment 75), in which you will note a very great increase of pigment induced by injection of toluylendiamine and pyrogallic acid respectively. The pigment in both cases is altogether more diffuse and less particulate in its form than that seen after transfusion. In the fresh tissue the pigment was seen (Experiment 63) to be diffused amidst the protoplasm of the cell, or to be in exceedingly minute granules of perfectly spherical form. Larger granules or globules were very few in number. The same was the case in Experiment 75—most of the pigment was in diffuse form. After transfusion, on the other hand, a very large proportion of the pigment is in the form of large clumps and conglomerate heaps, as may well be seen in the sections I now show you.

1. The amount of blood pigment to be found in the spleen in health varies, within very wide limits, even in animals of the same class. It is usually more abundant in birds than in mammals. 2. Age more than any other factor influences its amount. It is most abundant in the spleens of aged animals. 3. The variations that occur in disease are less striking and less marked than is the case in the liver.

RED BONE MARROW.

A third seat in which a certain amount of pigment is usually found in health is the red bone marrow. The pigment is in the form of minute granules lying within the marrow cells. Its chemical characters are indefinite. In health it frequently fails to give any reaction of free iron when tested. The fresh marrow gives scarcely any reaction with sulphide of ammonium—at most a light greenish stain.

The conditions that favour the presence of pigment in this situation are, I find, much the same as in the case of the spleen. It is increased in old age; in old animals, especially in dogs, I have sometimes found it present in very considerable quantity. Such increase is always associated with an increase in the pigment of the spleen. The relation between the marrow and the spleen in this connexion is much closer than between the liver and spleen.

KIDNEY.

The liver, spleen, and red bone marrow are the three situations in which, as I have said, blood pigment may be found in varying quantity in conditions of health and disease, independently altogether of extravasation or congestion. There is one other organ, however, in which, according to my observations, such pigment may also be found; not, however, in health, but only in disease, and that only rarely. That organ is the kidney. I do not here refer to the presence of hæmoglobin or hæmoglobin casts such as we naturally find in the kidney—for example, in paroxysmal hæmoglobinuria. I refer to blood pigment proper, partly granular, partly diffuse form, occupying a definite situation—namely, the cells of the convoluted tubules. I show you now a section of kidney from a case of disease in which you will note the peculiar characters and situation of this pigment, also its great abundance. The granules are uniformly small in size and resemble in character those present in the liver cells in the same disease—namely, pernicious anæmia. The further characters of this pigment and the conditions under which it is met I have fully described in my paper "On the Excretion of Blood Pigment in Pernicious Anæmia."[1]

BLOOD PIGMENT AS AN EVIDENCE OF HÆMOLYSIS.

What interpretation are we to put upon the facts just recorded? I have dwelt at some little length on the subject, noting particularly in the case of the liver the results of my observations with regard to the precise situation of the pigment, the differences in its microscopic characters under different circumstances, and the conditions under which it appears in one or other situation. I have done so purposely, for it was by a study of these various points I was led to certain conclusions of some importance regarding the significance to be attached to blood pigment as an indication of a destruction of blood.

It has been usual to hold that the presence of blood pigment (always of course apart from extravasation or congestion) in such organs as the liver or spleen is not only an indication of some previous destruction of blood, but also that its amount indicates the extent of that destruction. Other things being equal, the larger the amount, so it has been held, the greater necessarily the previous destruction. Such was the view I held at the outset of my investigation. One result of the foregoing study was to make clear to me, as I shall now endeavour to make clear to you, that this is very far indeed from being the case. On the contrary, the significance attachable, in my opinion, to blood pigment as an index of hæmolysis varies very much under different circumstances. Its presence may denote not a larger, but, on the contrary, a lessened destruction; while conversely its absence is not only compatible with, but may indeed point to an increased destruction. If our consideration were limited to the case of mammals in health it might almost be said that the amount of blood destruction is frequently inversely proportional to the amount of blood pigment present in such an organ, for example, as the spleen. What significance it has indeed depends far less on its amount than on its character and situation, affording as these latter do important and reliable indications as to the nature of the preceding changes in the blood. Consideration of mere amount alone, apart from its character and situation, may lead to entirely erroneous conclusions regarding the extent of these destructive changes.

[1] Practitioner, 1888.

ACTIVE AND PASSIVE DESTRUCTION OF RED CORPUSCLES.

From a study, then, of the character and distribution of blood pigment under different circumstances of health and disease I have been led to distinguish sharply two different processes in the blood, each of which may lead to a formation of blood pigment, and each marked by different changes in the red corpuscles.

The first of these is marked by a gradual decay of the red corpuscles. Retaining their form and their hæmoglobin to the last, they are ultimately taken up bodily by the active cells of the spleen or leucocytes of the blood and are stored up within the spleen or in the capillaries of the liver. Within these cells their hæmoglobin becomes transformed into blood pigment, and the pigment so formed is characterised generally by the varying size of its granules and by the largeness of at least some of them, corresponding in size, as they may do, to that of the original red corpuscle. It is this process that leads to the formation of the larger particles and clumps of pigment I have shown you in the capillaries of the liver in frogs, birds and mammals; and also in the spleen of old mammals and after transfusion. The particular point to be noted about this process is that the whole of the hæmoglobin of the corpuscle is converted into blood pigment and that the pigment so formed is never found within the liver cell. The conditions favourable to such a mode of death of the red corpuscle are for the most part negative. They are such as old age, abstinence from food, want of exercise—such, in fact, as necessarily imply a relative inactivity of the cells of the body, and therefore presumably a relative absence of any great changes in the other constituents of the blood—namely, the plasma and leucocytes. This change in the corpuscle implies an absence of any influences in the plasma of the blood likely to affect the red corpuscles injuriously. The *rôle* of the plasma and leucocytes in bringing it about is a purely passive one, and hence this mode of death of the red corpuscle may, as I have suggested, conveniently be described as a passive destruction of red corpuscles viewed in relation to the *rôle* taken in it by the blood as a whole, or *chronic* viewed in relation to its slowness.

The second process is marked by a different series of phenomena. The first of these is a liberation of the hæmoglobin of the corpuscle. It is set free into the plasma and may, as in the other case, likewise be taken up by cells of spleen or leucocytes of blood. If so, it is also converted into blood pigment; but this pigment can, as I have shown you, be distinguished broadly by certain features from that arising from passive destruction—viz., by the smaller and more uniform size of its individual granules. The usual fate of the hæmoglobin thus set free into the plasma is not, however, to be thus taken up by ordinary cells, but to be carried to the liver and to undergo within the liver cells a series of changes differing in detail and in results from those that take place in ordinary cells. The chief result is a formation of bile pigments, not of blood pigment. A formation of blood pigment does not necessarily, in my opinion, attend the breaking up of hæmoglobin by the liver cell in mammals. It is in this respect that this process *qua* the formation of blood pigment differs most materially from that of passive destruction. In the latter the whole of the hæmoglobin is thus transformed; in this process, on the other hand, none of it may be thus converted. This manner of disposal of hæmoglobin is not, as I have said, necessarily attended by a formation of blood pigment. If, however, it does occur, as it undoubtedly does both in health (birds and mammals) and still more markedly in disease (pernicious anæmia, action of poisons), only a part of the hæmoglobin molecule is converted into blood pigment, and the pigment so arising is distinguished by the features already described—namely, the small and uniform size of its granules. It is only pigment so formed that is found within the liver cell.

Such a liberation of hæmoglobin from the red corpuscles implies obviously certain conditions of plasma unfavourable to their preservation—in health, e.g., digestion, and in disease the action of poisons. The important point to recognise is that the liberation of hæmoglobin from the red corpuscle implies as surely the existence of changes in the plasma unfavourable to the red corpuscle as the gradual decay of the red corpuscle implies the reverse. The *rôle* of the plasma (and by implication also the leucocytes and other cells which control the constitution of the plasma) is thus as active as in the latter case it was passive, and hence, as I have suggested, this form of the destruction of the red corpuscle may conveniently be described as an *active* destruction of red corpuscles viewed in relation to the *rôle* of the blood as a whole, or *acute* viewed in relation to its rapidity.

The foregoing expresses, then, the views I have formed regarding the two ways in which blood pigment arises. We are thus led to recognise that two diametrically opposed processes in the blood may lead to its formation, one of them the result of inactivity on the part of the plasma and leucocytes of the blood (passive destruction), the other as definitely marking the activity of these elements (active destruction). Since the object of our study is to ascertain what it is that affects the blood as a whole, and not any one particular element of it, it will, I think, be clear that the process which brings about what I have termed "active" destruction of the red corpuscles is the only one that is rightly entitled to be spoken of as hæmolysis, since it alone affects the blood as a whole. For, as I have shown, the process termed "passive" is unattended by change in the blood generally—marks, indeed, the absence of such change. It is the changes connected, then, with active destruction of red corpuscles that especially deserve our consideration. It will be now clear to you what a varying significance amount of blood pigment, apart from its character and situation, may have as an indication of hæmolysis; for it is passive destruction of red corpuscles that leads to the conversion of the whole of the hæmoglobin into blood pigment and its storage up in the body in this permanent form; while active destruction, on the other hand, by causing its liberation into the plasma, favours its disposal and its removal from the body in ways—namely, by action of the liver cells—that are not necessarily attended by any formation of blood pigment at all.

The conclusion, then, is that hæmolysis may be unattended by the formation of any blood pigment, and hence it follows that the absence of such pigment in health in young mammals is quite compatible, as I will now show, with the occurrence of a very considerable daily hæmolysis.

Having thus made clear to you that the evidence to be derived from a study (1) of bile pigment and (2) of blood pigment both alike point to a certain destruction of hæmoglobin, and presumably therefore of blood, as an event of no uncommon occurrence, the question arises: What is the frequency or extent of this destruction in health?

Hitherto our knowledge on this point has amounted to this—that there is a close genetic relationship between certain pigments daily excreted from the body in the urine and bile and hæmoglobin; that blood pigment obviously derived from the blood is occasionally found in certain organs of the body; that the amount of this pigment varies very much under conditions as yet unknown; that when present it obviously points to a greater destruction of blood than when it is absent; that as its presence is not constant, even in the same animal, no conclusion can be drawn from it as to the frequency or constancy of a process of blood destruction; therefore that, on the whole, there is no reason to conclude that any destruction of blood takes place except under exceptional circumstances, such as malaria and paroxysmal hæmoglobinuria.

BILE PIGMENT AS AN EVIDENCE OF HÆMOLYSIS.

The evidence we have so far had before us differs in the case of bile pigment and blood pigment respectively. The close genetic relationship between the bile pigment and hæmoglobin and the daily formation of bile pigments afford presumptive evidence of a daily destruction of at least a certain quantity of hæmoglobin. This by no means points, however, to a daily destruction of blood; for, as we have seen, a certain amount of hæmoglobin may become effete (in the process of passive destruction of red corpuscles) without either the plasma or leucocytes participating—that is to say, without the occurrence of any destructive change in the blood as a whole. If, then, the formation of bile pigments can be subserved by passive destruction of blood-corpuscles—if the hæmoglobin thus rendered effete is sufficient to give rise to all the bile pigment daily excreted—it is clear that bile pigment as an indication of blood destruction loses much, if not all, its value. It then only remains an evidence of a certain slow destruction of red corpuscles. It thus becomes a matter of importance to ascertain by which of the two processes—an active or a passive destruction of red corpuscles—the formation of bile pigment is subserved.

As I pointed out earlier in this lecture, a large weight of evidence—more particularly that adduced by Minkowski and Naunyn—points not only to hæmoglobin as the source of the bile pigments, but also to the liver as the

seat of this conversion. That being the case, the question now before us resolves itself into one as to the relative importance of the pigment cells within the capillaries and the liver cells themselves as seats of formation of bile pigment. For, as I have shown you, the former are *exclusively* the seats of the blood pigment derived from a passive destruction of red corpuscles, none, according to my observations, ever being found within the liver cells; while the latter, on the other hand, are, although not the exclusive, nevertheless the *chief* seat of transformation of the hæmoglobin derived from an active destruction of red corpuscles.

NECESSITY OF DISTINGUISHING BETWEEN CHANGES TAKING PLACE IN THE CAPILLARIES OF THE LIVER AND THOSE THAT TAKE PLACE WITHIN THE LIVER CELLS.

It may appear at first sight a matter of indifference where precisely within the liver this transformation of hæmoglobin into bile pigment takes place, whether within the capillaries, through the agency of leucocytes or kindred cells, or in the liver cells themselves. I cannot so regard it. On the contrary, nothing in this relation has impressed itself more on my mind than the necessity of distinguishing sharply, so far as that is possible, between processes carried on in the liver cells and others that take place within the capillaries, through the agency of the large mass of leucocytes contained within them. Let me in illustration show you sections of liver (Experiments 33 and 34) from two of my experiments, in which a large quantity of ultramarine blue in suspension was injected directly into the circulation of rabbits duly anæsthetised. You will see how abundant the pigment is in the liver—more abundant, indeed, than in any other organ, with the single exception of the lungs. Even during the injection the liver could be seen, on being exposed, to become markedly blue. On examination most of the pigment was found within leucocytes; not a single particle could be found within the liver cells. The arrest of this pigment and its accumulation within the liver was therefore due entirely to the activity of leucocytes and kindred cells, endothelial and otherwise, and not in any way to the action of the liver cells. We are not justified in speaking of such a function of the liver as on a parallel with other functions—for example, the glycogenic, more properly so termed. The two are not even comparable with one another in importance. The one is carried out exclusively by cells of leucocyte and endothelial nature, the other by the liver cells proper, and the only circumstance common to both is that they are carried out within one organ. So with this conversion of hæmoglobin into bile pigment. If it can be effected equally well by leucocyte or liver cell—if, indeed, as Quincke and Minkowski and Naunyn would seem to maintain from the importance they attach to the pigment cells within the capillaries, these cells play the chief *rôle* in the formation of pile pigment—then the formation of bile pigment would cease to be exclusively a hepatic function. There would be no reason why it might not be carried out in other organs of the body equally rich in such cells—for example, the spleen.

When, now, passing from these more general considerations, we come to the facts themselves, we find as follows: First of all, it cannot, I think, be doubted that ordinary cells of leucocyte and connective-tissue nature do possess a certain power of forming pigments apparently identical with those of the bile from hæmoglobin. The observations, amongst others, of Langhans, Cordua and Quincke are, I think, conclusive on this point. Langhans clearly showed that the pigments causing the well-known colours of bruises—subcutaneous extravasations—are of the same nature as those of the bile. Even more clearly if possible has this been demonstrated by Minkowski and Naunyn. They have shown that a green pigment, giving the reactions of biliverdin, may be found in the pigment cells within the liver capillaries in the goose. They found, moreover, that the increased formation of bile pigments, which they induced by exposing these animals to the fumes of arseniuretted hydrogen, went hand in hand with the appearance of large numbers of these cells in this situation. Sometimes only a single particle amidst the blood pigment within these cells gave the green reaction of biliverdin; at other times the whole cell substance appeared green. Their conclusion, then, that these pigment cells take a part, if, indeed, not the major part, in the formation of bile pigments from effete hæmoglobin would thus appear to be amply justified under the circumstances. Such a view as to the mode and seat of formation of bile pigment would coincide in all points with the well-known observations (1880) of Quincke regarding the ultimate fate of the red corpuscles. According to Quincke, the normal fate of red corpuscles after a life duration extending for a period of from two to three weeks is to be taken up by the white cells of the blood and deposited in the capillaries of the liver, spleen and bone marrow. Within these cells their hæmoglobin is transformed into various products of an albuminate nature, partly coloured, partly colourless, and these are afterwards used up in forming new red corpuscles, or are got rid of by being excreted through the liver cells. Presumably during these changes, although as to this Quincke says nothing, the bile pigments are also formed. (It will be noted in passing that the fate of red corpuscles, as described by Quincke, corresponds with only one of the processes I have described as taking place in the blood, and that the less important—viz., passive destruction.)

Now, while admitting that the formation of bile pigment from hæmoglobin through the agency of leucocytes or connective-tissue cells is possible; while admitting, further, that the conclusions drawn by Minkowski and Naunyn from their observations appear amply justified, I nevertheless cannot admit that such a method of formation of bile pigment is even a common one, still less the usual one in health, and for the following among other reasons:

First of all, it appears to me that mistake is likely to arise if attention be directed too exclusively to one group of animals, and if the results thus obtained are applied directly, without correction, to animals of another group. This mistake has, I venture to think, been made, in some degree at least, both by Naunyn and Minkowski and by Quincke, the former having based their conclusions too exclusively on their observations on the goose, the latter on his observations on the dog; for in both these animals the presence of a certain number of pigment cells in the capillaries of the liver is, as we have seen, the rule. On the other hand, my observations on the rabbit, cat, guinea-pig, pig, and in man show that the presence of such cells is the exception; and this is, so far as my observations go, invariably the case in all young mammals, including even the dog. Individual differences exist in different animals in this respect, dependent mainly, as I believe, upon individual differences in the power of resistance of the red corpuscles—a power which admittedly varies in different animals. Be the explanation what it may, the fact remains that in the rabbit, for example—and most of my observations have been made on this animal—I have time after time examined the liver without finding a single pigment cell in its capillaries. To find them, indeed, has been the rare exception. Nevertheless, the excretion of bile pigment in the rabbit—as, indeed, in all herbivora—is, to say the least, fairly abundant. The daily excretion of bile is greater in the herbivora than in the carnivora. According to Bidder and Schmidt, in the cat and dog it is approximately 14 cc. and 19 cc. per kilo of weight respectively; in the rabbit and guinea-pig it is 136 cc. and 175 cc. per kilo respectively. With such an abundant excretion of bile, containing a considerable percentage of bile pigments, one might reasonably expect to find pigment cells in the capillaries of the liver if these are the source of the bile pigments. Still more might this be expected when it is borne in mind how permanent such blood pigment is, lasting, as it frequently does, for weeks, months and even years. Yet none are present. I am compelled therefore to conclude either that the mode of formation of bile pigments may vary in different animals—sometimes being effected through the agency of leucocytes, sometimes through the agency of the liver cells; or that its formation by the former, when it does occur, is altogether unimportant and insignificant, and the constant seat of this process is within the liver cell itself. The first conclusion seems to me altogether untenable, if only on general grounds. It appears to me altogether improbable that a function so characteristic of the liver as that of the formation of bile pigments should, after all, be discharged, not by the special glandular structure—the liver cell,—but by ordinary cells of leucocyte and endothelial nature lying adjacent to the liver cell. Moreover, on such a view it is difficult to understand why bile pigment is not formed by the cells of the spleen, seeing that sometimes they are even more abundantly supplied with blood pigment than the leucocytes within the liver. Even Minkowski and Naunyn, however, have failed to find any trace of biliverdin in the pigment cells of the spleen.

So much, then, for the evidence pointing away from ordinary

pigment cells, even when situated in the capillaries of the liver as the ordinary seats of formation of bile pigment, and pointing away in a corresponding degree from passive destruction of red corpuscles as the source of the hæmoglobin thus transformed. I have now to draw your attention to evidence pointing to the liver cells as the seat of this transformation, and to an active destruction of red corpuscles as a necessary precursor of this process, and that, too, not only in mammals, but also in birds. I have shown you that nothing more clearly indicates such an active destruction of red corpuscles than the presence of minute granules of blood pigment in the liver cells, more especially in those of the portal zone of the hepatic lobule. I have shown you, moreover, that, although not constant, such pigment is very frequently found in the liver cell, more especially in birds; to a much less extent in mammals.

It now remains for me to show, from my experiments, that an increased formation of bile pigments is more frequently associated with an increased deposit of blood pigment within the liver cells than it is with an increase of pigment cells within the capillaries. Further, that such an increased formation is frequently attended solely by an increase of blood pigment in the former situation, not a particle of pigment or a single pigment cell being discoverable within the capillaries. And lastly, that a large increase in the pigment cells within the capillaries can take place without any increased formation of bile pigments (Experiment 89). To illustrate the first two points I now show you a section from Experiments 42 and 43. Two healthy rabbits received at intervals doses of toluylendiamine as follows, the injections being made subcutaneously:

Experiment 42.

Sept. 19th	...	0·18	gramme	per kilo. of weight	= 0·5	gramme.
,, 20th	...	0·13	,,	,,	= 0·35	,,
,, 26th	...	0·18	,,	,,	= 0·5	,,
,, 29th	...	0·36	,,	,,	= 1·0	,,

When killed, on Oct. 13th, it had lost 3 oz. in weight.

Experiment 43.

Sept. 15th	...	0·18	gramme	per kilo. of weight	= 0·5	gramme.
,, 19th	...	0·15	,,	,,	= 0·4	,,

When killed, on Sept. 20th, it had lost 6 oz. in weight.

In both cases, especially in Experiment 42, you will note the great abundance of fine pigment within the liver cells, all of it giving the reaction of free iron. So small are the individual particles, indeed, that it is only with higher powers (300 or more) that their great number and their precise situation within the liver cells can be properly made out. In both cases, moreover, no less striking than its abundance in the liver cells is the absence of pigment cells from the capillaries. The bearing of these observations will be at once obvious when I state that, as will presently be seen, toluylendiamine causes an increased formation of bile pigments and distinct destruction of blood—viz., an acute destruction of red corpuscles. That the blood pigment within the liver cells owed its origin to the destruction of free hæmoglobin within these cells there can, as we have seen, be no doubt; and the conclusion may, I think, be permitted that it was likewise within the liver cells that the bile pigments so largely excreted were also formed. Evidence of a similar kind pointing to the same deduction was afforded by experiments on pigeons and observations on man. From these observations I infer that it is within the liver cells, and not in the capillaries, that hæmoglobin is transformed into bile pigment. The hæmoglobin thus transformed must have escaped from the red corpuscles before passing into the liver cell. In short, the source of the bile pigment is free hæmoglobin.

It will thus be seen that, although I do not absolutely deny to pigment cells of leucocyte and connective-tissue nature, such as we occasionally find in the capillaries of the liver, the power under certain circumstances of forming pigments similar to the bile pigments from hæmoglobin, I am undoubtedly of opinion, for the reasons above stated, that such a mode of origin of the bile pigments is altogether secondary in importance to their derivation from the liver cells. For not only are such pigment cells frequently entirely absent from the tissues of animals in which an undoubted, it may be even a largely increased, formation of bile pigments is taking place, but also, what is even more significant, a largely increased formation is frequently marked by an increase of the blood pigment in a situation where it can only, in my opinion, be derived from free hæmoglobin—namely, within the liver cell. Such an escape of hæmoglobin from the red corpuscle into the plasma of the blood being, as we have seen, the chief feature of an *acute* as distinguished from a *passive* destruction of red corpuscles, the answer which my observations supply to the question with which we started is that: (1) the formation of bile pigments by the liver is subserved by an active destruction of red corpuscles and not a passive one; (2) a certain destruction of blood is therefore a phenomenon of daily occurrence.

ABSTRACT OF A

Clinical Lecture

ON A

CASE IN WHICH SUCCESSIVE ANEURYSMS WERE TREATED BY LIGATURE OF FOUR LARGE ARTERIES.

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GENTLEMEN,—The subject of our clinical lecture to-day is a case you are well acquainted with, the patient having been in the hospital three times and having undergone the ligation of no less than four of the main arteries for the treatment of aneurysms. He was first admitted on March 9th, 1888, suffering from a popliteal aneurysm with a large sac, which was rapidly increasing. He was thirty years of age, and by occupation a police constable; previously he had been a soldier in Egypt and also a professional runner, his best time being one hundred yards in ten seconds and a quarter. He had had venereal disease, but there was no certain history of syphilis. The aneurysm was of the right popliteal artery, and was attributed to slipping off the kerb, when he felt "something give way." This was one month previous to admission. The superficial femoral artery was tied with a silk ligature. All pulsation at once ceased in the aneurysm, and the patient made a satisfactory recovery. He was readmitted a year later, suffering from an aneurysm of the other popliteal artery. There was no history of injury. On this occasion treatment by digital compression was tried for thirty-one hours, but no improvement resulted, and on Aug. 23rd the left superficial femoral was ligatured with silk. Pulsation in the aneurysm at once ceased, and the patient recovered. In February, 1892—that is to say, four years after his first admission—our patient was admitted for the third time; on this occasion he was suffering from a pulsating swelling, clearly an aneurysm, behind and above the manubrium sterni. In the previous November he had fallen from and under his horse. For this aneurysm the right common carotid and the third part of the right subclavian were simultaneously ligatured; this was on Feb. 22nd, 1892. The carotid was tied with silk and the subclavian was tied in two places and divided between. These operations seemed for a time to arrest the progress of the aneurysm, which subsequently gradually increased, and finally ruptured through the skin, the patient dying of hæmorrhage on May 19th, 1892. A minute examination of the ligatured vessels and aneurysms was made by Messrs. Ballance and Edmunds, but instead of reading their report it will, I think, be more instructive for us to go through the case again, discussing the various points that arise in the light of what we now know. The patient, then, was admitted suffering from popliteal aneurysm, which was treated by the operation first practised by John Hunter at St. George's Hospital in December, 1785. Before this, popliteal aneurysms were treated, if treated at all, either by amputation or by laying the aneurysm open, turning out the clot and ligating the two ends of the artery; this latter operation was almost invariably fatal. With a view to reduce this mortality Hunter devised his great operation; as you know, he tied the femoral in Hunter's canal, and this alone sufficed to cure the aneurysm. He had himself lost an apparently favourable case of popliteal aneurysm treated by the old operation from hæmorrhage, and he contrasted this with the freedom from hæmorrhage after amputation. "Why not then," he asks, "tie the artery where it can be safely tied in amputation and save the limb"? This he did, and the procedure has constituted one of the greatest

advances in surgery that it has ever fallen to the lot of one man to make. Hunter himself saved four out of the five cases on which he operated, and other surgeons were equally successful. French surgeons have claimed that Hunter's operation was merely a revival of that performed by Anel eighty years previously. Anel had been called on to treat a monk suffering from an aneurysm of the brachial artery accidentally caused by venesection; Anel tied the brachial immediately above the aneurysm, which was thus cured.

Now, the differences between Anel's and Hunter's operations are: First, that Anel's was on the arm and Hunter's on the leg; this is a great difference—for instance, the blood-supply of the arm after ligation of its main artery is much better than that of the leg; gangrene is very rare in the arm. A second difference is that Anel tied immediately above the aneurysm, whereas Hunter tied at some distance from it. From a pathological point of view Anel's may be the better procedure, but it is far easier for the surgeon to tie the superficial femoral artery than to seek the popliteal in the ham, in close proximity to a large pulsating tumour, a procedure which Anel, be it understood, neither practised nor recommended. It has sometimes been stated that the cause of the failure of the old operation was that the artery was diseased near the aneurysm. This, however, Hunter himself pointed out was not the case, and you will see the same in the specimens on the table. Another reason for the success of Hunter's operation has been given—namely, that by it a small current of blood is allowed to trickle through the aneurysm after the ligature of the artery, thus causing the deposit of laminated clot. You will remember that in neither of these popliteal aneurysms after the ligation was there the slightest pulsation; this is nearly always the case in popliteal aneurysms. Pulsation in them immediately after ligation is either due to a double superficial femoral, as in Bell's case, or to the artery being imperfectly occluded. Later recurrent pulsation may happen from excess of the collateral circulation, and this may be so extensive as to prevent the cure of the aneurysm. Failure from this cause is happily very rare; the treatment is rest, and if this fails religation nearer the aneurysm.

As to laminated clot, when it is found in a popliteal aneurysm after ligation it has been formed before ligation, and is not due to any trickling of blood through the aneurysm after ligation. On ligation the cavity of the aneurysm and the popliteal artery become filled with clot, which later is converted into fibrous tissue, the whole aneurysm being represented, as you see in the specimens before you, by a shrunken mass of fibrous tissue. The ligature which I used was silk boiled in a perchloride of mercury solution. Innumerable substances have been recommended for this purpose, but silk has this great merit—that it can be readily and certainly made aseptic by boiling, a treatment which catgut and other animal ligatures will not stand. Ever since arteries have been ligated surgeons have had to consider how tightly the ligature should be drawn; whether, in other words, the two inner coats should be ruptured or not. Paré, who reintroduced the ligature, endeavoured not to injure the vessel, and Hunter took the same view; but in the early part of the present century Jones in his classical work on hæmorrhage gave the result of numerous experiments, from which he concluded that the coats should be ruptured. It must be remembered, however, that in these days of antiseptics and absorbable ligatures the problem is widely different from what it was in Jones's time, when the ligature had to work its way through the vessel and be discharged externally. Jones's experiments, too, as he points out, were incomplete. He made no experiments without rupture of the coats; these Scarpa made a few years later, and he arrived at the opposite conclusion. So the controversy has gone on, the latest contribution to it having come from our hospital. For myself, I think it has now been conclusively proved, both by experiments on animals and experience in man, that the coats should *not* be ruptured; in arteries of any size it is unnecessary, in the case of the largest arteries it is to invoke the gravest risk of hæmorrhage. In trying not to rupture the coats one has to be careful not to fail to occlude the vessel. It is clear that with a reef knot the ends must be slackened for an appreciable time in order to make the second hitch, and this gives an opportunity for the pressure of the blood to redistend the loop of the ligature. Tying the second hitch tightly will not tighten the loop. To obviate this the so-called surgeon's knot has been devised and it was this knot that I used for the femoral that was first tied. This knot does not answer this purpose—indeed, some say it is inferior to a reef knot. Another way of meeting this difficulty has been devised by Messrs. Ballance and Edmunds. The aneurysm needle draws a double ligature under the artery and if the loop is divided two ligatures lie side by side. Both these are to be used. The first hitch of a reef knot is tied on each separately, then the two ends on one side are taken in one hand and the two ends on the other in the other hand, the loops being drawn sufficiently tight to occlude the artery; the knot is then completed as a reef knot by treating the two ends in each hand as single threads. This is called a "stay knot." It has been objected that it is a somewhat bulky knot. I did not find it so with silk; but if you prefer it you can complete each reef knot separately, the principle being that the friction in the two single hitches first made and between the two loops offers so much resistance to distension by the pressure of the blood that ample time is allowed to complete the knot; a further advantage is that with two loops there is a great range between the force which is just sufficient to occlude and that which just stops short of rupturing the coats, thus there is little fear of injuring the vessel. The stay knot, I may say from experience, is not at all complicated—indeed, if the knot is completed as two separate reefs, it is simplicity itself. I used the stay knot for the left femoral and the common carotid—with what result we will now see.

We will commence with the report on the right femoral which had been tied with the surgeon's knot four years before death. For about three-quarters of an inch at the seat of ligature the lumen is occluded, with the exception that a very fine bristle can be made to enter it. This tiny winding channel is crossed by several perforated diaphragms, the coats are uninjured, but apparently were not quite brought into contact by the ligature and the vessel is practically impervious; above and below the seat of ligature the vessel is patent, but is much diminished in size. No trace of the ligature could be seen. Below the vessel was patent down to the aneurysm, where the popliteal artery and aneurysm were together converted into a small mass of connective tissue. The left femoral had been tied with a stay knot three years before. The vessel was blocked at the seat of ligature by fibrous tissue (organised clot) for about half an inch; in this were minute holes, along which a bristle would not travel, owing to the openings not corresponding in what may be called the successive diaphragms. The coats could easily be followed and had not been injured by the ligature, but appear not to have been brought quite into contact, the closure being completed by a clot which subsequently became converted into fibrous tissue. The vessel was patent above and below the seat of ligature; no trace of the ligatures was seen. The condition of the artery below and of the aneurysm whs the same as on the right side. The right common carotid: at the seat of ligature for three-quarters of an inch the coats are uninjured, in contact and adherent. The whole length of the vessel above and below this was filled with clot; the ligatures were encapsuled in connective tissue. In all three cases the whole seat of ligature was enveloped in a small fusiform mass of connective tissue. The ligatures on the femorals fully answered their purpose, and that on the common carotid seems to have been ideal.

With respect to the subclavian artery, you will remember that as the aneurysm needle was being passed the vessel gave way, and I had to treat it as a wounded artery—namely, by applying a ligature above and below and dividing the vessel between them; the ends, you will see, are separated by half an inch and lie in a mass of fibrous tissue. On the proximal side there is no clot whatever, although the inner coat has been ruptured and is recurved, and though the nearest branch above is one inch and a quarter distant from the seat of ligature. On the distal side there is a clot extending to the first branch—that is, for half an inch. The silk ligatures have ulcerated through the vessel and lie in minute inflammatory cavities just large enough to hold them at the side of the vessel. On the patient's third and last admission to the hospital there was an obvious aneurysm behind the manubrium sterni. It must not be inferred that an aneurysm in this position is of the innominate artery, for aneurysms frequently spring from the front of the arch and pass up in front of the innominate. This, in fact, was what was eventually found to be the case in this patient. The aneurysm was a sacculated one, communicating by an opening the size of a shilling with the arch of the aorta, just in front of the origin of the innominate, which was perfectly normal. There are several specimens in our museum of these aneurysms; in one, the aneurysm arises, as in our present case, from the

aorta alone; in a second, by an opening common to it and the innominate artery; in a third, the opening of the aneurysm is from the innominate, but only from just within its mouth. It is not possible from the position, then, of the aneurysm to determine whether it is innominate or aortic. With respect to other symptoms, the most important is the comparison of the two radial pulses; if the right is decidedly weaker the innominate is probably involved. The various pressure symptoms may be caused by aneurysm of either artery.

With respect to the treatment by distal ligature, it is to be remarked that if the aneurysm is purely aortic the operation can only offer temporary relief, though several cases are now on record in which much good appears to have been done. In the case of purely innominate aneurysms a cure probably would be obtained if a method could be found of preventing the passage of any blood along the innominate artery; but this is not effected by the ligature of the carotid and the third part of the subclavian. In the present case the innominate and the whole length of the subclavian as far as the seat of ligature were patent, so that a large amount of blood continued to flow through the innominate after the operation Clearly the ligature of the carotid reduces considerably the amount of blood flowing through the innominate, but the good effect of tying the third part of the subclavian is not so clear, since the collateral circulation for the arm and brain is supplied partly by the branches of the first and second parts of the subclavian. On this account some surgeons have recommended that the vertebral should also be tied, but *the* operation for these cases, if it were only feasible, would be the ligation of the first part of the subclavian; this operation up to the present time has always been followed by fatal hæmorrhage, but it is encouraging to remember that Smyth of New Orleans has ligatured a larger artery—namely, the innominate—with success; we may therefore be permitted to hope that with the progress of surgery the operation may yet be successful.

THE MASTOID ANTRUM IN CHILDREN.

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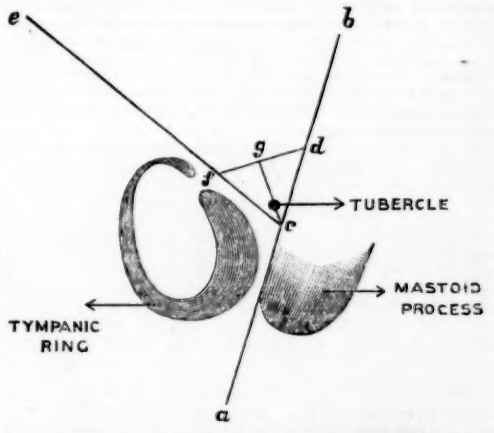
MR. ARBUTHNOT LANE has drawn attention to the great importance of the mastoid antrum in connexion with the functions and diseases of the middle ear. After reading his papers I examined the cavities of a number of children whose ages ranged from one to twelve years, and found that they presented very uniform appearances and relations in each case, and admitted of the following description:—The mastoid antrum is a cone-shaped cavity with rounded angles, situated in the most external portion of the petrous bone, the base being turned towards the middle fossa of the skull, the apex running downwards, backwards and outwards, abutting on the base of the mastoid process, opening at its upper and anterior aspect into the recess immediately above the incus; a line drawn from the centre of the base to the apex, forming about an angle of 45° with the direction of the mastoid process, measuring from a quarter to three-eighths of an inch from base to apex, the same in diameter at the base, gradually narrowing to the apex; lined with mucous membrane continuous with that lining the rest of the tympanic cavity and containing a viscid fluid. As regards its development, it is the cavity enclosed by the junction of the projecting lips of the mastoid sulcus, which join posteriorly with the lamellæ of the horizontal portion of the squamous division, the upper lip with the posterior part of the internal lamella, the lower with the posterior part of the outer, the inner surface of the outer lamella being cellular, where it forms the outer wall of the antrum.

For the purpose of describing its relations to surrounding parts it presents for examination a base or roof, an apex, an opening, and external, antero-internal and postero-internal walls. The roof forms a portion of the floor of the middle fossa of the skull, and corresponds to a surface of bone on the superior surface of the petrous bone from one-fourth to three-eighths of an inch in diameter, slightly external to the eminence formed by the superior semicircular canal, irregularly circular or triangular in outline, and formed by the upper lip of the mastoid sulcus overlapping the internal lamella of the horizontal portion of the squama, the petro-squamous fissure often being evident, after stripping off the dura mater, which sends a process into it, and occasionally a fine bristle may be passed through it into the cavity. The roof is generally thin, often cellular under the upper layer of compact bone; to remove it, commencing from behind, is the easiest way of demonstrating the cavity, the lining mucous membrane often remaining intact. The apex abuts on the base of the mastoid process, sometimes pointing straight into the groove for the lateral sinus—the intervening portion of bone being smooth, extremely thin and translucent,—at other times pointing more towards the mastoid mass, being either smooth or cellular and never having any communication with that process. The antero-internal wall formed by the mastoid sulcus is generally reticulated, and is in relation at its upper and posterior aspect with the semicircular canals (the superior on a slightly higher level), being separated by a layer of dense bone which increases in thickness from the front backwards and measuring about one-eighth of an inch behind. In front of the canals and on a lower plane is the facial nerve in its canal, also separated by a layer of dense bone from one-sixteenth to one-eighth of an inch in thickness; the wall soon slopes away from these structures, narrowing to the apex. A gap is left at the upper and anterior angle, forming the opening of the cavity.

Voltolini describes a canal occasionally leading from the fossa subarcuata, or the depression below the superior semicircular canal, into the mastoid cells. I have a specimen in which the canal opens into the antrum on the antero-internal wall. The postero-internal wall forms a portion of the posterior fossa of the skull, corresponding to a roughly triangular surface on the posterior surface of the petrous



bone, external to the semicircular canals, the base upwards; it is often smooth, thin and translucent, sometimes cellular towards the cavity. The relation of the groove for the lateral sinus varies considerably, sometimes the groove covering a considerable portion of its outer and lower aspects, at other times only its lower aspect, or not coming into relation with it at all, but skirting external to and below it. Between the roof and the postero-internal wall the superior border of the petrous bone projects into the cranial cavity, along which runs the superior petrosal sinus, enclosed in the tentorium cerebelli. The external wall is roughly triangular in shape and always lined at its superior and anterior aspects with a layer of intercommunicating cells, all of which open eventually into the main cavity; it is formed by the posterior part of the outer lamella of the horizontal portion of the squama, joining with the lower lip of the mastoid sulcus, evidences of the fissura mastoideo-squamosa often being visible. This wall corresponds on the external surface with a depression felt behind the attachment of the auricle at its upper part, above the mastoid process. A small tubercle may often be felt close to the attachment of the auricle, separated from the mastoid process by a slight groove; if a hole be drilled straight in at this tubercle it will open into the antrum, as a rule just above the apex. A rough method of marking out this wall on the exterior is to draw a line along the anterior edge of the mastoid process, parallel to the main direction of that process (see diagram, *a*, *b*). In this

line take a point, *c*, at the base of the process, and from it measure upwards a quarter of an inch to *d*; from the same point, *c*, draw a line, *c e*, forwards and upwards, forming about an angle of 70° with the line *a b*; from *c* measure along it a quarter of an inch to *f*; on joining *f* and *d* a triangle will be marked out corresponding fairly well with the surface of bone covering in the cavity. Again, if a line, *c g*, be drawn through the centre of the line *f d* to *e*, it will closely correspond to the junction of the antero-internal and postero-internal walls; it will be seen that this external wall forms a wedge-shaped piece of the posterior meatus at *f*. The thickness of the wall varies both as regards its inner cellular and its outer compact linings; sometimes the wall is translucent owing to the outer layer being thin, at other times this outer layer measures from one-sixteenth to one-eighth of an inch in thickness and is of extreme density, but both layers seem to increase with the age of the child. The opening corresponding to the gap in the antero-internal wall is situated at the upper anterior aspect of the cavity; the margin of the gap, together with the roof and external wall, form a triangular space with the base upwards, the sides of the triangle being about equal, each measuring about one-eighth of an inch. At the apex is lodged the tip of the horizontal process of the incus, the orifice of the canal for the chorda tympani being immediately internal to or below this. Running parallel to the internal boundary and about one-eighth of an inch from it is the facial nerve in its canal. A probe might possibly be passed into the opening through the meatus after removal of the membrane and ossicles; I have never tried this, but with a suitably bent probe it might be managed. So that, as Mr. Lane points out, the cavity must be regarded as a part of the middle ear, serving to secrete and store up the viscid fluid which lubricates the tympanic cavity and its contents; it is also evidently in the most advantageous position for such a purpose, and movements of the head no doubt help in the evacuation of its contents. With such functions and connexions it ought to be described, both developmentally and anatomically, as part of the petrous bone and not of the mastoid, especially as the division of the petro-mastoid is purely an imaginary one. The name also is misleading. A more correct and descriptive one would be "tympanic receptaculum."

Vienna.

INVESTIGATIONS INTO THE ETIOLOGY OF MEDITERRANEAN FEVERS.

BY SURGEON-CAPTAIN LOUIS HUGHES, A.M.D., MALTA.

MUCH has been written about a tedious form of fever prevalent along the coasts of the Mediterranean which, though quite distinct from enteric fever on the one hand or intermittent (malarial) fever or ague on the other, yet often occurs side by side with these diseases, and has so close a relationship with them as to be frequently called by the unscientific hybrid term "typho-malaria." Whether or not it is identical with cases of so-called typho-malaria occurring in India,[1] America,[2] China,[3] South Africa[4] &c., I cannot at present say, but it is very evident that the same fever exists at many points along the Mediterranean, where it is known as "Malta fever," "Rock or Gibraltar fever," "Neapolitan fever" &c., and for want of a better name I shall here call it "Mediterranean fever." It is said to bear a very close resemblance to some chronic forms of remittent fever met with in India. This present abstract from a detailed report lately rendered to the War Office is the result of eighteen months' work in Malta, where no endemic malaria (ague) exists, and where, both in the wards and in the laboratory, I have had the opportunity of treating and seeing some hundreds of cases of this fever, and I bring it forward hoping thereby to establish the etiology of this fever on a firmer basis.

1. That there is a fever present in the Mediterranean having such distinct and constant features both clinically and pathologically as enables it to be identified from other diseases has been well worked out by Marston,[5] Veale,[6] Bruce,[7] Moffat[8] and many others,[9] and without entering into details I will mention a few of its leading characteristics. Clinically it has a peculiarly irregular temperature curve, consisting of intermittent waves of pyrexia of a distinctly remittent type, each wave lasting from one to three weeks, with generally an apyrexial interval of two or three days. In rarer cases the remissions may become so marked as to give it an almost intermittent character, but distinguishable clearly from the paroxysms of ague. This pyrexial condition is usually very chronic, lasting even six months or more, and is not markedly affected by quinine or arsenic. It is usually accompanied by obstinate constipation, progressive anæmia and debility, and is followed, in a large number of cases, by very chronic neuralgic and rheumatic complications, from which the patient may not recover for perhaps two years. The death-rate is very low; but as the average stay in hospital is from seventy to ninety days, the expense incurred by the State for invaliding and non-effective pay, both in the army and navy, since our occupation of the Mediterranean has reached an enormous sum. During last year, after eliminating all cases of febricula and enteric fever as far as possible, in Malta alone it was reckoned that the loss to the State on account of this fever was equal to the value of the services of the whole non-commissioned garrison (7697 men) for over three days. The fever is both endemic and epidemic in character. Pathologically the spleen is at first much enlarged, but about the fifth or sixth week it becomes harder, and occasionally shrinks to even less than its normal size. The alimentary tract is subject to irregular patches of congestion, but this has no relation to Peyer's patches, which are not affected. The mesenteric glands are enlarged, but less so than is the case in enteric fever. There is no so-called malarial pigmentation (Klebs and Crudeli).

2. A micro-organism distinguishable from others by its appearance and mode of growth has been found in those parts of the body where from clinical symptoms and post-mortem appearances one would expect to find it, and it is, I hold, present in every case. I have now been successful in obtaining from the spleens of five men who undoubtedly died of Mediterranean fever (duration varying from nine days to five months) a special micro-organism similar in every respect to that discovered by Surgeon-Captain Bruce, A.M.D.,[10] in eight cases, and by Surgeon Gipps, R.N.,[11] in two cases, making in all fifteen cases. This micro-organism I have in each of my cases carried through six generations of pure cultivations. In two cases I was able to demonstrate microscopically its presence in fresh splenic substance. The only case in which it was not found was accounted for by the use of excessively alkaline agar, as I have since proved by control experiments with pure cultures from other cases.

3. I have met with no other micro-organism present under similar circumstances, nor do I know of any other disease in which this micro-organism is present, though test experiments have been made in various fatal cases from other causes. In all fatal cases of enteric fever I have so far found an organism present in the spleen corresponding in appearance and manner of growth with that described by Eberth and Gaffky.

4. Pure cultivations of this micro-organism have been introduced, twice by Bruce[12] and twice by myself, into the muscles of the forearm of healthy monkeys that have previously been under observation for periods of between two and four months. A colony was mixed with sterilised bouillon and the strictest precautions taken. No local changes occurred at the seat of inoculation. In each case the temperature began to rise in about thirty-six hours and followed the acute course of severe attacks of this fever. The former two monkeys died and my own two were killed during the third week of the fever, having temperatures between 106° and 107° F. In each case pure cultivations of a similar organism were obtained from the spleen and liver, and in my own cases from the blood, of these monkeys. Five minutes after death the liver and spleen appeared large and congested, and there were irregular patches of intestinal congestion. Peyer's patches were normal, as were also the mesenteric glands. The micro-organism was carried through six generations of pure cultures. Again, pure cultures obtained from the spleen and blood of one of my monkeys were injected into the forearms of two other monkeys, pre-

[1] Marston: Army Medical Department, Report 18.
[2] American Army Circular, No. 6, p. 109, 1865. American Journal Med. Science, 1881. [3] Durand-Fadel.
[4] Army Medical Department Blue-book, 1878.
[5] Ibid., 1861. [6] Ibid., 1879. [7] Brit. Med. Jour., May 5th, 1889.
[8] Army Medical Department Blue-book, 1889.
[9] THE LANCET, June 18th and Aug. 13th, 1892.
[10] Practitioner, September, 1887, and April, 1888.
[11] Transactions of the Epidemiological Society of London, vol. ix., p. 76
[12] Army Medical Department Blue-book, 1890.

viously under observation for from four to nine weeks respectively and having during that time steady temperatures, never over 100° F., their normal temperature being about 99° F. In about thirty-six hours the temperature rose, and though there were no pathological signs at the seat of inoculation, yet these two monkeys suffered from fever for two and a half to three months respectively. They lost weight, and in spite of the weather being warm suffered at times, apparently from rheumatism of the arms and legs, but eventually recovered. Their temperatures were taken carefully three times a day, and showed in a most remarkable manner the typical intermittent waves of remittent pyrexia, and there can be no doubt that they were suffering from true Mediterranean fever.

5. This micro-organism, which I believe to be the proximate cause of Mediterranean fever, grows best in nutrient material the alkalinity of which is slightly less than that of human blood, and at a temperature of from 37° to 39° C. On the sloping surface of a 1½ per cent. peptone agar, at a temperature of 37° C., its colonies become visible to the naked eye in from 120 to 125 hours after primary inoculation from the human spleen. They first appear as minute, transparent, colourless drops on the surface of the agar. In about thirty-six hours they become of a transparent amber colour, and, increasing very slowly in size, become opaque in from four to five days from their first appearance. At this time they somewhat resemble split pearls lying on the agar surface. Under a low power with transmitted light the colonies appear of an orange colour, quite round, and with a definite but granular margin. If kept on moist agar they increase in size, but remain circular in shape, and gradually coalesce. In the course of three months they turn to a bright buff or even orange colour, and increase in thickness by heaping up at the centre of the colony, but never attain a great diameter. No liquefaction occurs. Though they cease to grow at the end of two months the colonies retain their vitality at a suitable temperature for over three months. They cease to grow at 18·5° C. and die if kept long at a moist temperature below 15·5° C., but live a long time in a dry state. They will not grow as primary growths on agar having an alkalinity in excess of the blood, but if cultivated in successive media of increasing alkalinity they may be educated to grow in very alkaline media. In this case, however, they are longer in appearing, and grow more slowly and in a very diffuse manner over the surface of the agar, showing at the same time many abortive attempts at colonisation. These diffuse growths, however, if transferred to agar having a suitable alkalinity, again revert to their original characteristic form of growth. They grow also in gelatine and bouillon. In the former it grows very slowly at 22° C. without liquefying. In the latter it gives rise to a general and increasing opaqueness, commencing on the fifth or sixth day and afterwards forming a white precipitate consisting of these cocci, but without forming a surface pellicle. Microscopically in the hanging drop they appear as very minute cocci, 0·008–0·3 mm. (Bruce), ovoid or nearly round in shape, in rapid molecular motion, and at times to be seen in chains composed of two or more. They stain readily with gentian or methyl-violet and fuchsine, but lose their stain rapidly if treated with alcohol. Mounted in balsam they appear as minute cocci, here and there arranged in short chains. They can be observed in fresh splenic substance after death and in the blood during life of men suffering from this fever.

6. From accessible data collected from statistics and records of the last seventy years, from investigations during a recent localised epidemic, from the distribution, and more especially from a comparison of the dates of admission of cases of this fever with the amount of rainfall, it would appear that its presence in Malta and Gibraltar is connected with human excrement, as is said to be the case with enteric fever. The above facts have also drawn me to believe that the poison of this fever, when infecting the human body, is aerial in nature, and arises from fæcal and organic matter in porous soils when these are undergoing a process of drying, somewhat after the manner in which the miasm of malaria (ague) is said to be given off from suitable sources, and that in most cases it enters the human frame by way of the air passages. I have no evidence in favour of infected food or drink having any causal connexion with this fever. Its occurrence as an epidemic will be found, I believe, to be preventable. What is now needed is a suitable name and place among fevers in the published standard works, that it may no longer be described as abortive and modified enteric fever or ague, nor be classed as climatic variations of these two specific diseases. Its etiology is of great importance to England, as the Mediterranean, besides being a great winter resort and a half-way house in which to acclimatise regiments proceeding to England, has also a permanent force of over 24,000 English soldiers and sailors, who are all more or less exposed to the effects of this fever, both in garrison towns and at the various foreign ports which our squadron visits.

COMPOUND FRACTURE OF THE INFERIOR MAXILLA TREATED BY WIRE SUTURE.

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DENTAL SURGEON TO THE LEEDS GENERAL INFIRMARY.

THE obstacles which have to be overcome in order to maintain fractured portions of the inferior maxilla *in situ* are so numerous that I desire to record the method which I have adopted in several cases with equally good results. The great advantages over other methods are the perfect rigidity of fractured portions, neatness, cleanliness, absence of a bulky splint and an earlier use of the maxillæ for masticating purposes.

A powerful wherryman aged nineteen was admitted into the Leeds General Infirmary on May 11th, suffering from compound fracture of the lower jaw &c. A gutta-percha splint and a four-tailed bandage were applied, but without effect, and on May 19th I was asked to see the case. I found the lower maxilla fractured transversely across the ramus on the patient's left side, also perpendicularly between the two fangs of the first molar on the same side, and likewise perpendicularly through the socket of the second bicuspid on the patient's right. The front portion was much displaced, being deeply depressed and exposing the second fang of the molar in its full length. The front portion was also considerably overlapping the posterior part, carrying the median line of the maxilla considerably over to the patient's left side. I took impressions in wax of both maxillæ. On May 20th the patient was anæsthetised, and with a dental engine and a specially made bayonet-shaped drill I made a hole through the jaw between the first and second molars on the patient's left side, holding an oral spoon on the inner side to guard the drill from piercing the root of the tongue. I next passed a stout silver wire through the drilled hole and bored a second hole between the fang of the canine and the first bicuspid, and, having brought the wire through from the inside, twisted the ends together and tightened them with pliers, I bent the tail down flat, so as to be out of the way. The chief difficulty in these cases is to return the wire after having passed it through the first drill hole. The method I adopt is as follows:—While drilling the hole I hold, or get a dresser to hold, an oral spoon on the inner side as a tongue guard. Having pushed the wire through into the bowl of the spoon, the latter curls it from the tongue and one can then seize it with a pair of forceps. I then bend a long loop on it and, having passed a fine wire through the second drill hole, attach it to the loop and draw it through. The oral spoon is a great help by safeguarding the tongue, turning the wire, and preventing the finger from being lacerated in feeling for the wire—an important factor in cases of a specific character. In addition to the suture I applied a Hammond's splint, which fixed the fractured portion on the patient's right, and finally a well-ventilated gutta-percha splint.

On May 26th the parts were in a most satisfactory condition. There was no discharge and the patient was free from pain. On June 2nd the portions wired together were in perfect position, but the back teeth met before the front ones, probably owing to the fracture through the ramus. A broad cotton bandage (double thickness) was applied, the frontal portion being tightened in order to raise the body of the jaw. On the 11th the teeth were well opposed to each other. The patient was free from pain, and all looked healthy. He was made an out-patient. On July 7th the bandage and Hammond's splint and wire suture were removed. All was found firm and in good position. To avoid future trouble from the stumps on the patient's left side I removed them.

In a case which I attended some time ago there was the same happy result. The inferior maxilla was divided in the median line to facilitate the removal of cancer from the floor of the mouth. There was difficulty in obtaining union in the ordinary way, but the application of a strong wire suture, applied as described, answered most efficiently, and there was rapid union.

Leeds.

THE PREVENTION OF SUICIDE IN THE INSANE.[1]

BY H. SUTHERLAND, M.D.OXON., M.R.C.P.LOND.,
PHYSICIAN TO ST. GEORGE'S (HANOVER-SQUARE) DISPENSARY.

THE following remarks on the prevention of suicide in the insane are of a practical character, and may, I hope, be found useful to those who are engaged in the treatment of the insane, whether such treatment be carried on in an asylum or in the house of a physician. In the first place I shall refer to a few statistics as briefly as possible. The population of England, according to the last report of the Registrar-General, was 29,001,018, of whom 13,152 committed suicide. The number of lunatics in England and Wales was 87,848 at the same date, of whom only 12 committed suicide. Roughly speaking, 1 in 14,000 sane people and 1 in 7000 insane people—that is to say, twice as many insane as sane—commit suicide. It is impossible to say how many of the population at large have suicidal propensity, but if we turn to the tables of the Commissioners in Lunacy we find that not less than one-third of the patients admitted are entered in the case books as suffering from this tendency. In the year 1888 the number of patients admitted amounted in all to 14,000, and of these not less 4000 odd had suicidal propensities. When we compare the number of patients who have suicidal tendencies with the actual number who commit suicide, it must be confessed that we owe a heavy debt of gratitude to those by whose skill and obedience this calamity is reduced to so small a proportion. Out of 4217 patients with suicidal tendency, only 19—that is, only one case out of 222—succeeded in committing the act, the remaining 221 having been prevented from accomplishing the fatal deed by the care and vigilance of the attendants. It is the relatives of the insane who are responsible for the majority of suicides. They delay the admission of patients until some awful tragedy occurs; they interfere unnecessarily with the treatment, and they endeavour to remove patients from care before they have properly recovered. My first private case was that of a man who had been looking down the barrel of a loaded revolver and refusing food for several days. The patient was only fit for an asylum. My advice that he should be sent there was not followed, and he died soon after from starvation and the neglect of his family. Foolish relatives will often introduce penknives, scissors and other dangerous articles into an asylum secretly, which are immediately taken away from the patients if the attendants know their work. It is only by careful and constant supervision that the number of suicides may be reduced to a minimum. A good superintendent will be particularly careful to instruct his staff to lock up all medicines, never to allow patients to handle them and never to serve out more than the exact dose indicated by the label on the bottle. These rules should also be applied to lotions, disinfectants, poisonous plasters (such as belladonna), and more especially to pills, which the attendant must see the patient swallow, or he may hoard up a poisonous quantity and take them all together. Attendants should also exercise every precaution with regard to keys and razors, and any loss of these should be at once reported. Keys must be worn on the person, displayed as little as possible and attached to the attendant's wrist at night should he sleep in the same room as his patient. Knives and forks are only to be used in the presence of an attendant, and are to be carefully counted before and after meals and always kept locked up at other times. Fireirons, and even brooms, are to be secured in the cupboard, and all broken glass and crockery must be immediately removed. All outsiders, such as charwomen, tradespeople, workmen and gardeners, must receive special instructions not to leave dangerous tools and implements about. Suicides from eating arsenical putty and rat poison—taken, for instance, from the coat pocket of a careless attendant—have been more than once recorded. A curious suicide occurred in a public asylum, in which a woman died of peritonitis induced by her having swallowed a quantity of needles and pins. A large proportion of suicides are due to hanging. All objects therefore such as nails, wires, ropes, sash lines, bell pulls, tapes and string must be removed from the reach of the patients. No parcel should ever be sent into the wards till the string has been removed and the contents examined. I have known even a piece of slate pencil or an old spoon to be used for the purpose of strangulation. By attaching a brace or a handkerchief to one of these, pushing the pencil through the keyhole of a door, pulling it taut and then making a noose, a gallows can be arranged quite as effective as any of the public executioner's more complicated arrangements for a drop. Patients will swallow almost anything. On post-mortem examination I have more than once found a piece of towel with the asylum mark on it in the intestines of a patient. One gentleman under my care swallowed his sleeve-links, which, however, passed through the digestive tract without doing any harm; and I have once seen a patient chew up and swallow an indiarubber utensil, but she recovered ultimately.

In most public asylums many of the inmates are employed at work at the trades they practised before admission. Such patients require constant watching and daily examination. Should they return to their old delusions or to hearing voices, perhaps commanding them to commit suicide or homicide, they must be at once sent back to the dangerous wards of the asylum. In the bookbinders', shoemakers' and tailors' shops patients are entrusted with large sharp knives and heavy hammers, which would prove formidable weapons in the hands of a maniac. The games of the patients should also be appropriate to their mental condition. I have known a male suicidal patient swallow a small billiard ball, which, sticking in his larynx, choked him before assistance could be procured. No suicidal patient should be sent out in the fields with a working party. A patient cut his throat with a hay knife who had attempted suicide only fourteen days previously. No suicidal patient should ever be allowed to go out walking outside the grounds of the asylum. Patients have been known to escape from their attendant and jump over a railway bridge or into a river, or to throw themselves under a passing train. The site for a new asylum should therefore be chosen as far as possible from all such dangers; no ponds should be allowed in the grounds and all water-butts should be securely covered. The internal arrangements also of an asylum are of the utmost importance with regard to this tendency. All doors should open outwards. Windows should be protected by steel bars, which, if painted a light cane colour, have no unpleasant prison-like appearance. The waterclosets must have neither locks nor bolts, but should close with a spring ball which is let into the door. A very common method is for the patient to make an attempt by setting fire to her clothing. It is, therefore, obvious that lucifer matches and all other inflammable materials should be carefully concealed from the insane. All fireplaces in suicidal wards must be protected by properly constructed guards. The taps for turning on gas must be shut up in cupboards, of which only the attendants have the keys, and care should be taken that all rooms in which these patients are lodged should be lighted, both by day and by night, by windows and gas-jets which are quite out of the reach of the inmates. Patients should also be carefully watched at meals. Sometimes they will refuse to take food, or not take enough, or will conceal their food in their stockings, or place it under the stair carpets, or bolt their food ravenously in a dangerous manner. One curious case is reported in which a lunatic endeavoured to commit suicide by plunging his head into a tureen of boiling soup. Attempts at suicide have also been made without the use of any appliance, as by strangling with the hands or thrusting the fingers down the throat.

All single rooms should be constantly inspected if a patient is placed in them. A woman under my care butted at the door of a padded room with her head, raising a large swelling over the frontal region, under the delusion that she was shut up in the cabin of a ship which was sinking, and that the only way to escape drowning was by trying to force the door open with her head. Many suicides take place at night; therefore in any large institution there should always be a night watch on duty, who is to make his round of the wards at regular hours and register the time of his visits to the different stations on the tell-tale clock. The ingenuity of some patients in preparing suicidal or homicidal weapons is worthy of a better cause. Dr. Pritchard Davies has given me a collection of these dangerous instruments, taken from patients at the Broadmoor Criminal Asylum. Amongst these were found a piece of crinoline steel let into a piece of firewood and bound round with string; a quantity of stones tied up in a piece of sacking, and many other curious mis-

[1] A paper read at the West London Medico-Chirurgical Society on Friday, Nov. 4th, 1892.

cellanea. Mr. Lutwidge, the Commissioner in Lunacy, was murdered by a patient with a large nail, sharpened to a point, and thus made into a dagger, the handle of which was composed of pieces of old carpet. Dr. Orange of Broadmoor received a violent blow on the head from a lunatic, who used for his murderous purpose a large stone tied up in a stocking. But, as I before remarked, the relatives are more frequently to blame than are the doctors or the attendants. I was consulted some years ago about a woman who was a victim to melancholia; she was a patient at the St. George's Dispensary, and had marked suicidal tendencies. I suggested that she should be removed to an asylum, as I was most anxious to prevent an accident occurring in the house in which she resided. My advice was not followed, and the next thing I heard was that she had thrown herself from a window, alighted on her head, fractured her skull, and died. A grave omission on the part of the petitioner often occurs when he neglects to put in the statement that the patient is suicidal, if he is so. The deduction from this point is that, if there is any doubt about the matter, all patients should be considered suicidal on admission until the contrary is known. Another frequent cause of suicide is found where the relatives insist on removing the patient from the asylum before he is considered recovered by the authorities. A man was placed under my care suffering from simple melancholia without delusions. The first two doctors refused to certify. The second two found him insane and signed certificates. The patient was strongly suicidal. After a few days' residence in Blacklands Asylum the relatives called and pronounced him recovered, and in spite of all I could say removed him from our care and took him home. That night at supper he cut his throat with a large carving knife and destroyed his life in the presence of his family. Fortunately for myself I had discharged the patient "unimproved," so I just escaped having the suicide entered on my books, which would have happened if I had allowed him to go out on leave of absence, in which case the patient is still attached to the asylum and can be readmitted on the old certificates.

Richmond-terrace, S.W.

SOME PRACTICAL RESULTS OF THE INVESTIGATION OF CHOLERA IN GERMANY.[1]

BY WILLIAM RUSSELL, M.D., F.R.C.P. EDIN.,
ASSISTANT PHYSICIAN TO THE ROYAL INFIRMARY, AND LECTURER ON PATHOLOGY IN THE SCHOOL OF MEDICINE, EDINBURGH.

BEFORE the occurrence of the epidemic of Asiatic cholera in Western Europe during the past summer and autumn the importance of the discovery of its probable pathogenic factor can hardly be said to have been actively appreciated or valued. If the discoverer were correct it was only one more stone added to the temple of knowledge; but the discovery was applicable to conditions too remote—too Oriental, in fact—to command homage from the practical Anglo-Saxon. Even before this, however, Koch's discovery of the comma bacillus and the accuracy of his contention that it was the pathogenic organism of Asiatic cholera were accepted by many bacteriologists and pathologists and by some physicians. Still that acceptance might be regarded more as a laboratory belief than a practical faith; and Koch's comma bacillus commanded no special attention in the culture tubes in the laboratory.

In this paper I shall confine myself mainly to the experience of cholera in Berlin, as it was studied there in the Moabit Hospital and in the barracks attached to the Institut für Infectionskrankheiten, which is under the directorship of Professor Koch.

I may mention first a fatal case of cholera nostras recorded by Dr. Guttmann,[2] the first fatal case he had, and which occurred in July, before Asiatic cholera was known to exist in Germany. The case is recorded in detail, and its clinical picture closely resembles Asiatic cholera; it was regarded as a severe case of cholera nostras, as it was a solitary one; the stools were examined and no comma bacilli found. At the necropsy the entire small and large intestine showed the mucous membrane to be in a state of inflammatory redness and swelling. The solitary follicles and Peyer's patches, however, were mostly free, although some were a little swollen. This comparative freedom of the glands from the inflammatory process he regards as anatomical evidence that the case was not Asiatic cholera, with the proviso, however, that when cholera patients die in the stage of cholera-typhoid death may be so long delayed that the inflammatory swelling of the mucous membrane and the follicles may have considerably subsided. The degree and extent to which the colon shared in the inflammatory process is also against the case having been Asiatic cholera. He lays much stress upon the enlargement of the follicles, especially in the lower part of the ileum, in Asiatic cholera, as a fact which he noted in the epidemic of 1866, and which was confirmed by the necropsies of the more recent cases.

I shall now refer to some of the statistics of the Moabit Hospital from Aug. 24th.[3] There were admitted thirty cases of Asiatic cholera, of which fifteen died—two cases were brought in dead and were shown by necropsy and bacteriological investigation to belong to this group; fifty-four cases of cholera nostras, none of which died; 153 cases of diarrhœa, of which one died, and eighty-eight cases sent in to be under observation, of which none died. As regards diagnosis, Dr. Guttmann says the severe cases are easy of recognition, although the severe case of cholera nostras already referred to and a case of antipyrin poisoning which he had markedly resembled severe Asiatic cholera. With regard to the mild cases his experience was the reverse of this, and amongst the thirty cases there were five such. Some of these had a very suggestive history. Persons taken into hospital and placed in the observation wards because they had been in contact with cholera patients had after admission slight diarrhœa, and the stools, examined bacteriologically, showed the presence of comma bacilli. The prevalence of diarrhœa during and often preceding the appearance of an epidemic of Asiatic cholera is well enough known, and both in this country and elsewhere many of the cases occurring at such a time are spoken of as choleraic diarrhœa. Now, while it may have been shrewdly suspected that some of this class of case when accompanying an epidemic of Asiatic cholera were really mild cases of that disease, or, at all events, were the result of the reception of the cholera poison under conditions referable to the quality of the poison or the resisting power of the individual, still, this was only a "pious opinion," for no proof was possible. Further, it has been noted that many cases of cholera nostras have a more severe onset than mild cases of undoubted Asiatic cholera, and may be mistaken for it. From this, which is the clinical standpoint, there was no escape. Clinical medicine could go no further. Its impotence was manifest. At the Moabit Hospital, with abundant material, a capable staff, and great enthusiasm in the work, they had concluded that the bacteriological investigation of the stools separated and differentiated the cases. Out of some hundreds of cases of cholera nostras and diarrhœa they had examined fifty-one, and in not one of these was the comma bacillus found, or Finkler-Prior's bacillus. The bearing of this practical conclusion from the work of this hospital alone, the work being done as it was, is of the greatest importance and value, as it seems to me. Additional observations from many places may be added to it, and mayhap contradictory evidence may be forthcoming, but the results of investigation at this one spot, under the conditions referred to, can hardly be other than the illustration of a fact broadly applicable. If this be the case, the identification of mild cases of Asiatic cholera becomes of the greatest moment. In illustration of this I may refer to the facts of a case admitted into the cholera wards at Koch's Institute a day or two before I left Berlin, and which have since been published by Dr. Kossel. The case turned out to be one of Asiatic cholera, yet for some days before admission the patient, a man, suffered from diarrhœa, and had deposited his excrement in the water-courses, in quiet nooks in the Thier-Garten, and at whatever spot was most convenient when the calls of nature became imperative.

If we now look at the results from Koch's Institute, there were fifty-two cases of suspected cholera admitted into the barracks there; two were cases of Asiatic cholera. The

[1] A paper read at the Medico-Chirurgical Society of Edinburgh on Nov. 2nd, 1892.

[2] Berliner Klinische Wochenschrift, 1892, No. 41.

[3] Deutsch. Med. Wochenschr., 1892, No. 41.

clinical experience here was the same as at the Moabit—namely, that severe cases of cholera nostras were clinically identical with mild cases of Asiatic cholera, and that they could only be separated by bacteriological investigation. An important part of the work done in this laboratory was the examination of intestinal discharges and of soiled clothing sent from other places. According to Dr. Kossel's published figures,[4] forty-two such were examined, and of these nineteen gave the comma bacillus by culture. Fæcal matter and clothing were often received after having been treated with antiseptics, which of course prevented their thorough examination. I have seen there the most perfect cover-glass preparations of comma bacilli taken from the fæcal soiled clothing sent to the laboratory.

With reference to the investigation of the intestinal discharges I may say a word. The presence of comma bacilli may be demonstrated by cover-glass preparations made from the discharges, but this is not accepted as sufficient; plate cultures are made, and on these the characteristic colonies of Koch's comma bacillus are distinguishable under a low power in about twenty-four hours or even less, and, if further proof is required, stab-cultures can be made from the colonies and the changes effected in the nutrient gelatine followed. (These were demonstrated to the Society.) The length of time during which the comma bacillus was present in the discharges was followed in a small number of cases in the Moabit Hospital, with results varying from five to ten days. At Koch's Institute the number of Asiatic cases was too small to base any conclusion upon, but when I was there every motion passed by the Asiatic cases was examined by plate cultures.

With reference to Hamburg, which I also visited, the impression I got was that there had been too many patients to attend to for the staff to spare much time for bacteriological investigation; still, there they told me they had always found the comma bacillus. The experience gained and the observations made in Hamburg will, I trust, be published. One of the assistants at the Eppendorf Hospital had made five hundred necropsies on cholera cases by the time I was there, and such a series of cases could not fail to add to our knowledge even as regards naked-eye appearances.

A word or two may be said with reference to treatment. At the Moabit they tried salol and creolin and tannin injections with no satisfactory result. Calomel was used both in Berlin and in Hamburg, but I am not in a position to speak of the results. What impressed me most at the Moabit, in the old general hospital at Hamburg, and in the new one at Eppendorf was the reliance the staff had on saline injections. and the confidence with which they spoke of them and the absence of risk which attended the operations. At the Moabit Hospital Dr. Guttmann believed strongly in the subcutaneous introduction of the saline fluid, in Koch's they believed in its intravenous introduction, and in Hamburg I think they had used both methods. The apparatus used was an exceedingly simple one, but great care was taken to have everything properly sterilised. It is needless for me, to dwell upon the practical significance of the acceptance of Koch's comma bacillus as the cause of Asiatic cholera—it has made the disease a more tangible and comprehensible entity; it has shown how water, food, and clothing are infected and become the vehicles for spreading the disease; and in doing so has shown how it is possible to check and to arrest it, and, best of all, to prevent it. With Europe threatened by such a plague we place a higher value on this portion of Koch's work, and we place it amongst the great discoveries.

Edinburgh.

[4] Ibid.

PREVENTION OF CHOLERA.—At the Thames Police court this week a captain in the employ of the General Steam Navigation Company was summoned at the instance of Dr. Collingridge, medical officer to the Port of London, for wilfully neglecting to carry out certain of the cholera regulations provided by the Public Health Acts. Dr. Herbert Williams gave evidence in support of the charge. Mr. Gill represented the defendant and said the company were very anxious in every way to carry out the Order in Council, but thought an attempt was being made to saddle their captains with responsibilities they were not bound to undertake, and therefore the time had come to offer resistance. The magistrate said the case was not free from difficulties; yet, having allowed the passengers to land, the captain had taken full responsibility for the consequence, and would be fined £25 and costs.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL AND THERAPEUTICAL.

NOTES ON "NORMAL INTERMITTENT UTERINE CONTRACTIONS OF PREGNANCY."

BY J. D. WINDLE, L.R.C.P.I., L.M. DUB., M.R.C.S.

DR. PLAYFAIR, in his work on Midwifery,[1] quoting Dr. Braxton Hicks's paper in the Obstetrical Transactions,[2] states that "intermittent contractions of the uterus are constant and normal concomitants of pregnancy, continuing during the whole period of utero gestation. The contractions occur every five or ten minutes, sometimes oftener, but rarely at longer intervals. If the hand be kept steadily on the uterus its alternate hardening and relaxation can be appreciated with the greatest ease."

The following case illustrates the fact that these contractions are not, as is usually the case, always painless; indeed, in some instances that have come under my notice the contractions have been such as would lead one to infer that premature labour was about to take place. The first case of this kind I have noticed occurred about three years ago, when I was consulted by a woman in the seventh month of pregnancy for what she described as "cramp in the stomach," and from which she had suffered more or less for some time. Suspecting premature labour was about to occur I visited her at her home, when on palpating the abdomen I found the uterus contracted, and from this I concluded that labour had commenced. The pains continued for about two months, more or less modified by treatment up to the time of actual labour at full term. I may mention that my patient was in good health and that her previous pregnancies had been normal. Remembering the fact of the occurrence of painless intermitting contractions, I concluded that the case was a modified form of the normal state of things—viz., painful instead of painless contractions. Before the termination of pregnancy I had many opportunities of verifying the opinion I had formed. In this and subsequent cases, so far as I could make out, the contractions had no effect on the os or cervix, but the membranes became somewhat, but not markedly, tense. Since then I have noticed many similar cases, but in only one where the painful character of the contractions continued for any considerable period. In this case, also a multipara, they occurred regularly from Jan. 27th, 1892, to Feb. 15th, during which time I visited her every day. Delivery took place on March 2nd. It is a very common experience to meet with cases of threatened abortion and early miscarriages where pains constitute the only symptom, but which subside after a time without anything being expelled from the uterus, and for labour to take place at the full term of utero-gestation. I believe that many of these cases are examples of the painful instead of the normal painless intermitting contractions of pregnancy. If such be the case we have an explanation of the fact that it is rare for abortion or miscarriage to occur when pain is the only symptom.

Southall, Middlesex.

A CASE OF DOUBLE INTUSSUSCEPTION.

BY DUNCAN J. CADDY, M.B.

A FEMALE infant aged five months had a very severe fall on Friday, Nov. 21st, 1892. A few hours afterwards she began screaming loudly and appeared to be suffering great pain. The parents administered a powder and afterwards a dose of castor oil, with the result that the infant vomited freely, but nothing was passed per rectum. Next day the child still appeared to be in pain, but took a little milk, and the parents again administered an aperient powder. This caused more vomiting, but still no action of the bowels. On Sunday the child became cold and appeared very ill. On Monday at 8 A.M. the child, after much straining, passed a little bloody mucus per rectum and I was sent for. On arrival I found the child in a state of

[1] Vol. i., pp. 159-60. [2] Vol. xv.

collapse, the skin was bathed in a cold sweat and the eyes sunken. The abdomen was tympanitic, the pulse 200, the temperature 103·5° F., and the infant was vomiting stercoraceous matter. Examination per rectum revealed nothing. Upon palpating the abdomen, however, a short, thick, sausage-shaped tumour could be distinguished over the cæcum. It was clearly a case of intussusception, and the child died four hours later. The post-mortem examination revealed an ileo-cæcal intussusception about four inches in length, which had again become invaginated in the bowel further on, thus forming five complete layers. It is only for me to add that the child was well nourished and otherwise healthy, and that, the symptoms setting in almost immediately after the fall, it would appear as though this must have had some direct influence in causing the double intussusception; but I leave this for the consideration of others more experienced than myself.

Earl's Court-gardens, S.W.

HÆMATOMA AURIS.

BY E. ROUSE ROUSE, M.R.C.S., L.R.C.P. LOND. &c.,
ASSISTANT MEDICAL OFFICER, COLNEY HATCH ASYLUM.

HAVING collected a few notes on hæmatoma auris or insane ear, I should be glad of their publication in THE LANCET, in the hope that they may be of some interest to medical men, especially those connected with lunacy. I will first take into consideration the class of case in which the insane ear is most common. I think that cases of acute mania and general paralytics in the maniacal stage produce most examples of this class; those of chronic mania with recurrent attacks are also at times sufferers. As to which ear is oftenest affected my own observations differ from most observers, in the fact that the right ear has been most often diseased. If this is really the case, the theory that the flow of blood from the heart to the left side is more direct, and that there are fewer ramifications of the branches of the carotid arteries on the left side, will not hold good, as it is, I believe, generally known that the arteries on the right side anastomose much more freely. The cause of the swelling of the ear or ears is often very difficult to elicit, but I have little doubt that violence of some kind is the usual cause, and this need only be a slight rub or knock to produce the swelling. As an element in prognosis it is very valuable, as no doubt cases in which it occurs generally, but not always, end fatally; this is especially the case in double insane ear. I have also noticed that a fatal termination is much more rapid in these than in other cases. The treatment by blistering is no doubt very valuable in many patients, but I have seen several upon whom it has had little effect either in decreasing the swelling or preventing the after disfigurement. Again, is the disease so uncommon in sane people as is generally believed? My own experience teaches me that it is not, as amongst athletes, especially football players of the Rugby game and boxing men, it is fairly common. I know eight cases in which it occurred; in one the patient had the remains of double insane ear. This also, I think, will assist to prove that violence in some form is the most common cause, as undoubtedly in athletes the swellings can be traced to a blow or rub of some sort. I have not been able in some to discover the degeneration of the arteries which has been stated to so frequently occur, but no doubt this is very often seen, and the rupture of these degenerated vessels is the immediate cause of the swelling. In conclusion I may say that patients of the upper classes are more prone to the disease than the lower classes, at least we generally see many more cases in private asylums than county asylums; but the cause of this is difficult to understand, and perhaps many with more experience than myself will doubt this last assertion.

Colney-hatch, N.

METHOD OF FIXING PATIENTS FOR OPERATIONS UNDER ANÆSTHESIA IN THE SITTING POSTURE.

BY DUNDAS GRANT, M.A., M.D., F.R.C.S. ENG.

FOR many of the shorter operations on the mouth, throat, nose and ear it is very desirable to have the patient in the position in relation to light, attitude &c., in which examinations are habitually made. At the same time the sitting posture has many inconveniences for the administration of anæsthetics, and chloroform is practically inadmissible. Ether, however, as Dr. Silk has said, may be given with comparative security, and nitrous oxide without any anxiety whatever. Several years ago I demonstrated at the Central London Throat and Ear Hospital the possibility of removal of tonsils or adenoids, or even both, during the administration of nitrous oxide, and my colleagues were not slow in adopting a practice which in that institution has now become a matter of daily routine. Hitherto one great difficulty has been the tendency of the patient to slip off the chair at the moment when the anæsthesia becomes complete, and to have recovered consciousness by the time he is "collected" and propped up again. To prevent this accident the following simple method of fixation is recommended. A short jack-towel with the seam unstitched is placed round the back of the patient's neck like a priest's stole, with the ends hanging down in front. Each of these ends has firmly attached to it about two feet of soft, thick cord or thin rope. He is then seated on a chair which has a very narrow, high back, on the posterior surface of which, and at about the height of the patient's head, there is a stout upright hook. The middle of the jack-towel is raised off the patient's neck, lifted over the back of the chair and laid on the hook. The two ends are then brought backwards under the armpits and round the back of the chair. The ropes are then crossed over the hook and tied in a bow. The patient is thus simply, securely and "unalarmingly" fixed so that he cannot slip down. A band may be placed round the forehead to keep the head fixed, but this is most effectively and pleasantly done by the hands of some one standing behind. At the same time the patient can be instantly released by the simple pulling of the ends of the ropes forming the bow.

Upper Wimpole-street, W.

SUDDEN DEATH, WITH NECROPSY, SHOWING RUPTURE IN THE INTERNAL ILIAC ARTERY.

BY J. A. EWAN, M.B.EDIN.

THIS case is interesting not only in itself, but also because it well illustrates the importance of holding a post-mortem examination in every case of sudden death before granting a certificate.

A man aged fifty-three was a patient in the Dorset County Asylum for twenty-two days, and previously for two months in the County Hospital. On admission into the asylum his case was at once diagnosed as one of general paralysis, with absolute dementia, tottering gait &c. For some days there was no change in his condition, but on the eighth day he had a series of epileptiform convulsions, which continued until the following morning. After these convulsions ceased he was in a very helpless state, but they did not return until the evening of the twenty-first day, when they again commenced and continued until three o'clock in the morning of the twenty-second day. At a quarter to four his breathing suddenly became stertorous and a quarter of an hour afterwards he was dead. Post mortem were found in the head, as was expected, the usual changes that occur in general paralysis—thickened and adherent membranes, cerebral degeneration &c. and atheromatous arteries. The thoracic and abdominal organs were fairly healthy, but on turning aside the small intestines a large mass of clotted blood was discovered lying in front of the psoas muscle. This clot was carefully removed, and on further examination there was found a rupture of the internal iliac artery close to where it gives off its ilio-lumbar branch. This, then, and not any cerebral lesion, was the immediate cause of death.

Dorset County Asylum.

METROPOLITAN ASYLUMS BOARD.—The number of patients in the various hospitals of the Metropolitan Asylums Board at midnight on Nov. 29th was as follows:—Eastern Hospital, 363 scarlet fever, 61 diphtheria and 39 enteric fever; North-Eastern Hospital, 554 scarlet fever; North-Western Hospital, 314 scarlet fever, 82 diphtheria and 23 enteric fever; Western Hospital, 291 scarlet fever, 31 diphtheria, 1 typhus fever and 16 enteric fever; South-Western Hospital, 285 scarlet fever, 59 diphtheria and 24 enteric fever; South-Eastern Hospital, 366 scarlet fever, 19 diphtheria and 16 enteric fever; Northern Hospital, 856 scarlet fever and 12 diphtheria; Gore Farm Hospital, 786 scarlet fever. On the hospital ship *Atlas* there were 16 cases of small-pox.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se compare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ROYAL FREE HOSPITAL.

A CASE OF CHRONIC PYÆMIA; RECOVERY.

(Under the care of Mr. BOYCE BARROW.)

THROUGHOUT the course of the disease from which this patient suffered there was an absence of the more characteristic symptoms: there was no marked sweating, there were no rigors, gastro-intestinal symptoms were absent, and the temperature was at no period of his long stay in hospital remarkable for its irregularity or unusual height. Yet the abscesses in the chest and neck were without doubt pyæmic; this was shown by their number, the rapidity of their appearance, and the slight local disturbance. The point of interest in the case is whether they were secondary to the disease in the thigh, or whether (this being also pyæmic) they were in any way connected with the thrombosis resulting from the typhoid fever. The abscesses appeared over the sternum ten weeks before any pain was felt in the right thigh, and the fact that the œdema and pain reappeared in the left leg very shortly after the abscesses would suggest that the thrombus may have commenced to extend or break down. The chief point against any causal connexion between the thrombosis and the pyæmia is the great interval which elapsed (more than eighteen months) between the convalescence from the thrombosis and the commencement of the pyæmia. For the notes of the case we are indebted to Mr. Wilmott H. Evans, B.Sc., surgical registrar.

A wheelwright aged twenty-five was admitted into the Royal Free Hospital on April 27th, 1892. In June, 1890, he was in the hospital under Dr. Sainsbury for typhoid fever, during the course of which the left popliteal and the lower part of the femoral vein became thrombosed, causing pain in the calf and œdema of the leg. Since then he has been quite well until about six weeks before admission (March 10th), when he noticed two small, rounded swellings, one over the upper border of the sternum, a little to the right of the middle line, and the other immediately above the left clavicle at the outer border of the sterno-mastoid. These both increased in size, especially the one over the sternum, and a fortnight later the larger swelling was incised and a quantity of thin, yellow matter escaped. About the same time his left foot began to swell, especially after walking, but the swelling disappeared to a great extent when he lay down. Ten days before admission a third swelling appeared over the left side of the upper part of the sternum, and on the morning of the day on which he entered the hospital a fourth swelling, smaller than the others, appeared in the posterior triangle of the right side. From none of the swellings has he suffered any pain or inconvenience.

On admission the patient was found to be a strong, healthy-looking man. Nothing abnormal could be discovered in the thoracic or abdominal organs. Over the upper border of the sternum was a sinus from which sanious pus was oozing. A probe was passed backwards for nearly an inch, but no bare bone could be felt. Over the upper piece of the sternum, a little to the left, was a rounded swelling about an inch in diameter. The skin over it remained unaltered in appearance. Somewhat doubtful fluctuation could be obtained. A similar smaller swelling was found at the lower part of the posterior triangle of both sides. The left leg below the knee was somewhat swollen and slightly painful, and the hard cord caused by the thrombosed popliteal vein could still be felt. The superficial veins of the thigh were dilated. The family history was unimportant, and up to the attack of typhoid fever in 1890 the patient had always had good health. After admission he continued in the same condition, except that the sinus continued to discharge and the swelling increased in size. The temperature varied from 98° to 102° F.

On May 5th the swelling to the left of the sternum was aspirated and about a drachm of pus removed. On May 7th the patient was anæsthetised, and Mr. Barrow made an incision over the swelling in the front of the sternum and evacuated thin pus; the cavity was found to extend backwards between the second and third ribs, but no bare bone was to be felt; the cavity was scraped out with a Volkmann's spoon. The swelling in the left posterior triangle was treated similarly, and the sinus remaining from the former incision was also scraped. The three cavities were then filled with gauze soaked in an emulsion of iodoform and glycerine, and a dressing of carbolic gauze was applied. The cavities were syringed out daily with solution of perchloride of mercury and filled with iodoform and glycerine gauze. After the operation the temperature somewhat improved, but still occasionally went up to 101°. By May 26th he had so much improved—the discharge from the sinuses being very little and the left leg less swollen—that he was allowed to get up. He had slight stiffness over the right thigh. By June 10th the two smaller cavities had healed up and only a little pus still escaped from the sinus to the left of the sternum. The small swelling in the right posterior triangle had steadily increased in size and another swelling had appeared superficially to the right sterno-mastoid.

June 23rd.—The stiffness in the right thigh, mentioned on May 26th, has steadily increased, and he feels an aching there on walking, so he has been kept in bed. On examination a swelling was found, beginning a little above the level of the great trochanter and extending downwards for five inches; fluctuation can be obtained over it, but there is no redness. The sinus to the left of the sternum has almost healed.

25th.—The patient being under an anæsthetic, an incision four inches long was made over the swelling on the thigh and about three ounces of creamy pus escaped. On introducing the finger a hole one-third of an inch in diameter was felt in the bone just below the anterior superior iliac crest; a small sequestrum was removed and the softened bone around it was scraped with a Volkmann's spoon and a gouge. The whole abscess cavity was well scraped and dressed with a paste of iodoform, boracic acid and glycerine, and plugged with iodoform glycerine gauze. The wound was dressed daily in a similar manner and diminished in depth.

July 18th.—The wound on the thigh has partly healed, but still has some discharge; the sinus over the sternum is almost healed, but a little pus escapes; the swellings on the right side of the neck are slowly enlarging, and fluctuation can be obtained in each of them.

Aug. 10th.—The swellings on the right side of the neck were still increasing in size, so under an anæsthetic they were both incised, the pus evacuated and the cavities scraped; the sinus over the sternum was also scraped, and they were all plugged with iodoform and glycerine gauze. The wounds in the neck and on the thigh slowly diminished in depth, and by Sept. 27th they were quite healed, and on Oct. 1st the patient was discharged well.

ROYAL PORTSMOUTH HOSPITAL.

A CASE OF HYDATIDS OF THE LIVER; RECOVERY.

(Under the care of Dr. JAMES WATSON.)

THE following case of multiple hydatids of the liver shows the advantage of paracentesis as a means both of diagnosis and cure when suppuration has not occurred in the cyst. It is evident from the description of the case that some of the cysts disappeared after the withdrawal of a quantity of fluid, and there is a general feeling in the profession that this method should be tried before incision is attempted. "Incision should be made use of when tapping fails, where scolices instead of fluid form the greater part of the contents of the cyst, where suppuration is present or imminent, and where chest complications are set up by the hydatid, showing perhaps a risk of perforation."[1] Although this disease is more frequently met with at a late period of life, its occurrence in children is not very rare, and it has been met with at three and a half and four years of age. The following report is drawn up from notes made by Mr. T. H. Bishop, house surgeon.

A poor, delicate female child aged twelve was admitted to hospital on Aug. 23rd, 1891, suffering from abdominal enlargement, with occasional attacks of griping pain and constipation. On examination the liver was found to occupy

[1] Jackson: The Operations of Surgery, THE LANCET, vol. ii. 1881, p. 747.

the whole of the right hypochondrium, as well as the greater part of the left hypochondriac and epigastric regions. The measurements were as follows: On the right side it extended from the lower border of the fourth rib to half an inch below the level of the umbilicus, while on the left side it almost reached the level of the umbilicus. Fluctuation could be detected in the left lobe. The stomach resonance was absent. The urine was normal, and the heart and lungs were free from disease. On Sept. 2nd Dr. Watson requested Dr. Ward Cousins to make an exploratory puncture into the liver slightly above and to the left of the umbilicus. Two ounces of deeply bile-stained fluid were drawn off. This was found on examination to contain pus cells and a considerable amount of bile salts. Two days later ten ounces of similar fluid were withdrawn from the same spot. Next day the right lobe was aspirated by Dr. Cousins and two ounces of clear, limpid fluid withdrawn. This fluid had a specific gravity of 1007, was free from albumen and rich in chloride of sodium. No hooklets could be detected in it. From another puncture in the right lobe another two ounces of clear fluid were withdrawn. On Oct. 7th, the left lobe being distinctly larger than on admission, Dr. Cousins was requested to operate. He made an incision exposing the liver three inches in length in the epigastric region and to the left of the median line. The liver was stitched to the parietes and a trocar inserted. About a pint of bile-stained pus was withdrawn and a similar fluid continued to discharge for many days after. In November, however, the opening having almost closed and ceased to discharge, and the child's temperature having risen considerably, Dr. Cousins was asked to reopen the wound. This was done on Nov. 14th. The chloroform administered made the child very sick, and fortunately the efforts of retching had the effect of protruding the cyst wall through the opening, each effort bringing it further out. Assisted by gentle traction, the cyst wall was in this way completely evacuated. From this date the child improved rapidly, although healthy pus was withdrawn from the wound for some weeks, the last evacuation being made on Feb. 20th, when about four ounces of healthy pus were drawn off with a trocar. On April 10th the child was discharged, looking and feeling quite well and healthy. The liver was still somewhat large, though considerably smaller than on admission.

Remarks by Dr. WATSON.—There can be no doubt this case was one of hydatids, for although no hooklets were found in the fluid, we know that they are frequently absent from such tumours, and it has been generally accepted, as was pointed out by Fagge, that a tumour which is "distinctly cystic and embedded in the substance of the liver can be nothing but a hydatid." Again, there were, besides the suppurating cyst, the two others filled with clear non-albuminous fluid, rich in chloride of sodium, which is also distinctive of hydatids. The result was a satisfactory one, although it was attained after a somewhat prolonged treatment. If I had a similar case again I would avoid the frequent tappings practised in this instance, and, in the event of finding a cyst filled with pus, should recommend that hepatotomy be at once performed, and, where the cyst was filled with clear fluid, rely upon aspiration.

Medical Societies.

MEDICAL SOCIETY OF LONDON.

Athletic Exercises as a Cause of Disease of the Heart and Aorta—Selection of Methods of Treatment in Hæmorrhoids.

AN ordinary meeting of this Society was held on Nov. 28th, Mr. Hutchinson, President, in the chair.

Dr. COLLIER, of Oxford, read a paper on Athletic Exercises as a Cause of Diseases of the Heart and Arteries. He desired to direct attention to the growing tendency on the part of young Englishmen to indulge in certain athletic exercises to an extent likely to prove harmful. He referred to the connexion between oft repeated muscular effort and diseases of the heart, pointed out by Dr. Peacock, as observed in Cornish miners. In these men the symptoms began to develop at about the age of forty with slight dyspnœa and palpitation gradually increasing in severity. The pathological changes observed were dilatation and hypertrophy of the ventricles, with, in a certain proportion, incompetence of the aortic valves. He also referred to the researches of Dr. Clifford Allbutt contained in the St. George's Hospital Reports for 1870, in respect of the same causes operating in the forges, docks, and engine ring works of Leeds. The lesions developed soon in the badly fed; the aortic lesions being the most pronounced. Dilatation of the aorta increased the work of the heart by rendering necessary the propulsion of a larger quantity of blood, and the distension increased until incompetence resulted. Other observations on the production of "irritable heart" in soldiers had appeared in the *American Journal of Medical Sciences*, by Dr. Da Costa, of Philadelphia. This condition under forced marchbes frequently renders the men unfit for service. The same sequence of events had often been observed in animals, such as racehorses, greyhounds and foxhounds. The evidence, then, was conclusive as to the effect of frequently repeated muscular exertion in the production of heart disease. Dr. Morgan's researches on the after history of the oarsmen in the Oxford and Cambridge boat-races between the years 1829 and 1869 comprised 251 out of 255 still living, and he came to the conclusion that the majority were rather benefited than otherwise by their exertions. It must, however, be borne in mind that these researches bore upon picked and carefully trained men. Dr. Collier admitted that the medical men of university cities were not likely to see much of the evil effects of such sports, inasmuch as they usually developed later in life. Boating, moreover, appeared to entail less risk than either running or cycling, and he insisted upon the fact that it was in the frequent repetition of severe muscular effort that the danger lay. The practice of riding against time is considered to be particularly pernicious, in support of which he quoted a number of instances of resulting circulatory lesions. He had had opportunities of observing symptoms pointing to dilatation of the right ventricle in rowing, running and football adepts, but such symptoms occurred exclusively among badly-developed, narrow-chested, weakly men. The physiologically dilated and hypertrophied hearts of trained athletes underwent certain changes in the direction of atrophy of the muscular substance, which later on rendered the persons unable to cope with sudden extra strains.—Dr. SANSOM remarked that no symptoms of circulatory disturbance could be observed in many athletes, who nevertheless showed evidence of hypertrophy of the left ventricle. In coming to a conclusion whether this hypertrophy was to be regarded as physiological or pathological, the muscular development of the subject must be taken into consideration; when a large muscular system was associated with a large heart he was disposed to regard the condition as normal. He had, however, examined athletes who showed signs of dilatation of the right heart, while in others there was evidence of disturbance of cardiac innervation. He had seen a number of cases of tachycardia which were to be directly attributed to over-strain from racing on cycles against time. The condition might last for years, and structural disease of the heart had supervened. Under certain circumstances the delicate cardiac endothelium might develop a distinct endocarditis as the result of over-strain. Staff-Surgeon Preston, R.N., had pointed out the striking diminution in cases of disease of the heart and great vessels since the introduction of steam which had enabled the men to dispense with much of the heavy manipulation of sails and climbing of masts formerly necessary. During the ten years ending 1884 the ratio per 1000 of organic and functional diseases of the heart had fallen from 7·94 to 5·3; while the invalid ratio had been reduced from 3·9 to 2·9 per 1000. This was unaccompanied by a corresponding improvement in the land marines, thus showing that the reduction in the navy was due to labour-saving appliances. Syphilitic subjects were always the first to give way under exertion, and he believed that a man who had had syphilis ought to abstain from athletics altogether.—Brigade-Surgeon HAMILTON said that aneurysm had become rarer among soldiers of late years, but since the introduction of quick manœuvres the "irritable heart" had become far more common; it had also ben produced in the cavalry by riding without stirrups. He regarded a man with secondary syphilis as practically incapacitated from service. Functional disorganisation of the heart was also materially contributed to by the abuse of tobacco and alcohol.—The PRESIDENT did not take such a gloomy view as to the results of syphilis. For treatment he much preferred small doses of mercury, which was much superior to prolonged administration of iodide of potassinm, which undoubtedly had a most depressing effect on the muscular system.—Dr. COLLIER, in reply, said that the undergraduates of Oxford

did not often expose themselves to the risk of contracting syphilis. He agreed that when athletic exercises were abandoned the retrograde changes that took place in the heart were liable to render that organ unable to cope with sudden strain.

Mr. HERBERT ALLINGHAM read a paper on Hæmorrhoids, and insisted on the importance of recognising their varieties as determining the selection of treatment. He classed them as external, internal and intero-external. Internal hæmorrhoids he further divided into venous, arterial and capillary. He described the appropriate treatment in each variety, and expressed his preference for the method of surgical treatment by incision.—The PRESIDENT said that his experience confirmed his preference for Salmon's operation. He always thoroughly dilated the sphincter ani so as to obviate pain after operation.—Mr. SWINFORD EDWARDS did not believe that medicinal treatment benefited external piles: he was in the habit of removing them if they caused annoyance. The most important thing was, not the nature, but the amount of discomfort which the piles caused. If time were an object the crushing operation was the best, as the patient could be up and about in a week. He had treated about 120 cases by injecting them with a five or ten per cent. solution of carbolic acid in glycerine. Excellent results followed in cases in which the piles were reducible and could be kept up.—Mr. BIDWELL advocated the operation introduced by Mr. Whitehead.—Mr. SHEILD referred to the importance of transfixing the pile when it was being ligatured so as to prevent slipping of the ligature when the pile was removed.—The PRESIDENT added that he never found it necessary to cut off the pile after applying the ligature.—Mr. KEETLEY opposed Whitehead's operation as being an expense of time to the surgeon and of blood to the patient, without any compensating advantage.

CLINICAL SOCIETY OF LONDON.

Rhythmical Rocking Movements in Children.—Extensive Fracture of Superior Maxilla.—Pernicious Anæmia.—Cranial Cyst.—Movable Body in Elbow-joint.—Congenital Amputation of Forearm.—Extensive Unilateral Nævus.—Pancreatic Cyst.—Excision of Cancerous Stricture of Small Intestine.

A "CLINICAL" meeting of this Society was held on Nov. 25th, the President, Sir Dyce Duckworth, in the chair.

Dr. HADDEN exhibited two cases of Rhythmical Rocking Movements in Children. One was an intelligent little girl aged three years and nine months, who had swaying movements of the trunk and lower limbs when standing or walking. They were not present on lying down. The movements dated from the age of one year, when the child was observed to move the body from side to side when the piano was played, apparently keeping time. She had a good ear for music. The second was the case of an intelligent female child aged one year and nine months, who had rhythmical movements of alternate flexion and extension of the lower part of the spine, with flexion and extension at the hips and knee-joints. The movements had been observed for five months, and no cause for them could be ascertained. They were only observed when the child was sitting down.

Mr. STORER BENNETT exhibited a youth aged nineteen, who was admitted into the Middlesex Hospital in July last, under the care of Mr. Henry Morris, with an injury to his face caused by the explosion of a portable fire-engine. There was an extensive fracture of the right superior maxilla, which was partly detached and displaced in a direction downwards and inwards. He contrived a vulcanite splint which reduced the dislocation, and the movements of the lower jaw in biting had gradually driven the teeth of the upper jaw into their proper place.

Dr. F. R. WALTERS showed a man aged fifty, a smith, who worked with "delta metal," who was suffering from Pernicious Anæmia. The metal, a mixture of zinc, copper and iron, was believed not to contain lead. The patient had suffered from malaria in Mexico in 1889. He now had extreme weakness and pallor, with shortness of breath, puffiness of face, and swelling of legs and vomiting. There was a blue line on the gums, but no colic or dropped wrist, no enlargement of spleen or lymphatic glands, and no pain. There were some retinal hæmorrhages and a diminution in the number of red corpuscles, though the white corpuscles were not altered in number. The red discs, in addition, showed evidence of degeneration. He had been treated since the beginning of October with Fowler's solution in doses of from six to twelve minims, but with only very slight improvement.

Dr. NEWTON PITT and Mr. ARBUTHNOT LANE showed a man aged forty-two with a Cyst in the Right Parietal Region which had been noticed for a year. It had ruptured and was found to lead through the bone by an aperture about two inches in diameter. Before the fluid was evacuated from it pulsation was transmitted from the brain. There was a history of an accident some years before, and it was suggested that the injury had led to hæmorrhage between the dura mater and the bone, which had been followed by erosion of the latter. It was proposed that the cyst should be drained and occluded and bone grafts planted in the aperture. The contents of the cyst were like ordinary serum.

Mr. L. A. DUNN showed a boy aged seven who had a Piece of Loose Bone in his Elbow-joint. He fell down and injured the elbow three years previously. The part separated seemed to be the capitellum of the humerus, which had become loosely attached to the head of the radius.

Dr. FLETCHER LITTLE showed a man aged fifty-four, a greengrocer by trade, with a Congenital Defect of the Right Forearm, which had undergone intra-uterine amputation at the wrist. The sternum was also malformed, being grooved at its centre, diminished in length, and the gladiolus pressed backwards. The pectoralis major on the right side was imperfectly developed.

Dr. LITTLE also showed a girl aged eleven who was born with a very extensive Nævus of the whole of the right side of the body. The right arm and leg were longer than the left and the surface temperature of the right side was higher.

Mr. HULKE read a paper on a case of Pancreatic Cyst treated by exploratory laparotomy with a fatal result. An abdominal tumour was known to have existed since girlhood—so long, indeed, that the patient, a lady aged forty-seven, could not remember the time when first it was noticed. In December, 1878, when she entered the Middlesex Hospital, the tumour filled the central region of the abdomen from the top of the ensiform cartilage to the pubes. It seemed to be very fixed. Fluctuation could not be elicited. Latterly the patient, who had long been an invalid, had become greatly reduced by attacks of severe abdominal pain, with obstinate vomiting and constipation. At a consultation of the staff the preponderant opinion inclined to the idea of the tumour being ovarian, and an exploratory laparotomy was decided on. This was done. The tumour was found to be wholly retro-peritoneal in position. Its upper border was overlaid by the pancreas, which was firmly adherent to it, and below this by a large artery and vein (splenic?); also sagittally, its front was covered by vessels (superior mesenteric?); whilst its lower border was transversely overlapped by a piece of small intestine bound to it by an extension of the peritoneum covering the front of the tumour. An attempt to enucleate the tumour had to be abandoned in consequence of the firmness of its posterior adhesions over the aorta and vena cava. The swelling was tapped; much brown, glairy fluid was evacuated, and the opening in the cyst was secured to the tegumental lips of the abdominal wound. Death followed a few hours later from shock. A necropsy was forbidden by the friends, but the anatomical relations ascertained by the exploratory operation did not, Mr. Hulke submitted, allow of any doubt of the pancreatic origin of the tumour.—Dr. SHARKEY referred to a case recently operated on by Mr. Clutton. The woman was thirty-five years of age and there had been a history of a tumour on the left side for sixteen or twenty years. Two years ago Dr. Cullingworth explored it with a needle and some albuminous fluid was withdrawn. The tumour soon afterwards nearly disappeared. Three weeks ago she was admitted into St. George's Hospital, suffering some discomfort and pain, and a tumour was found in the left hypochondrium of remarkable mobility in all directions. On opening the abdomen it was found to be behind the great omentum and to be connected with the pancreas at the splenic end. It was enucleated and found to contain a yellow fluid of sp. gr. 1024, solid with albumen on heating, turbid, and iridescent from presence of cholesterin.—Mr. CLUTTON said that the tumour shot out of the wound quite easily, dragging with it the tail of the pancreas. Mr. Hulke's case reminded him of a recent paper by Mr. Jordan Lloyd, in which reference was made to instances of inflammation of the lesser cavity of the peritoneum, a kind of cyst being formed, of which the pancreas constituted part of the wall. When he was enucleating the cyst the pancreas bled very freely, and he had to introduce a glass tube for

drainage. There was persistent vomiting afterwards, which was immediately relieved on the tube being shifted. At the present time there was a large quantity of clear discharge, which was evidently pancreatic fluid.—Mr. GOULD inquired if there was any history of injury. He had operated on two cases. In one a permanent fistula resulted, and malignant growth afterwards developed round this, which proved fatal. In the other case the cyst was fixed and could not be brought to the surface. With a finger in the cyst, he therefore cut down behind, below the twelfth rib, and drained it posteriorly; the fistula rapidly closed up.—Dr. NEWTON PITT mentioned a case which he had published with Mr. Jacobson in the Transactions of the Royal Medical and Chirurgical Society; since that time the cyst had refilled. He considered it best to drain posteriorly, especially if there were likely to be permanent fistula.—Mr. HULKE, in reply, said that the cyst was near the head of the pancreas in his case, and there was no trace of peritonitis. There was an instance recorded of a pancreas so movable that it formed part of an intussusception, and the same writer mentioned two cases of enucleation of cyst which proved rapidly fatal. In the instance he recorded the swelling began in childhood, but there was no history of injury. The urine was free from sugar.

Dr. ROPER and Mr. W. A. LANE gave details of a case of Excision of a Cancerous Stricture of the Small Intestine from a case of complete obstruction of seventeen days' duration. The patient, a lady aged fifty-four, had been under Dr. Roper's care for many years, suffering from habitual constipation, for the relief of which it was necessary to render her motions quite fluid. In March, 1891, she had an attack of obstruction which yielded to acute treatment by enemas and purgatives; and after this she had several attacks which were successfully treated in a similar manner. Dr. Roper observed that during the last year her abdomen had gradually increased in size, though she lost flesh steadily; also that the small intestines were obviously distended and hypertrophied, while at no time had he been able to find any distension of the large intestine, which was capable of holding a large fluid enema. He had never been able to find any hard mass in the abdomen. He came to the conclusion that the patient was suffering from a malignant stricture of the lower part of the small intestine, and had discussed with her the advisability of having something done; but to this she would not consent. On March 7th she was seized with obstruction, which did not yield to the treatment which had been successful on previous occasions. Although Dr. Roper urged on the patient and her friends the necessity of an operation, they would not consent till it became obvious that she could not survive many hours unless she were relieved. Mr. Lane then saw her, at Dr. Roper's request, on March 25th, seventeen days after the onset of the obstruction. They felt that, in the face of the frequent vomiting of fluid fæcal material and of the very prostrated condition of the patient, an anæsthetic was inadmissible. A small opening was made in the middle line, when a tight annular growth was found just above the left sacro-iliac synchondrosis. As the mesentery was much shortened and puckered, it could not be pulled into the median incision. Another incision was made directly over it, and with the greatest difficulty it was drawn between the edges of the wound, where it was fixed by means of a steel rod covered with rubber transfixing its mesentery. A Keith's tube was tied into the bowel above the stricture, through which the intestinal contents escaped freely. The very enfeebled condition of the patient rendered any such operation as the removal of the growth and the establishment of intestinal continuity quite impossible. A few days afterwards the growth was excised and the proximal and distal portions of the gut were carefully united by sutures. Most of this suturing yielded, under the pressure exerted by the contents of the bowel, within a few days. When the patient had gained strength and flesh the question of establishing intestinal continuity and closing the abdominal wound was discussed with her, but she refused to consent to any operation which entailed any risk, being very comfortable as she was—in fact, more comfortable than she had been for many years, since she had regained her natural appetite and was no longer troubled with her bowels. The growth was situated in the ileum, a few inches above the ileo-cæcal valve. It only allowed of the passage of a director, and then with some difficulty. The points of interest in the case were the accuracy of the diagnosis, the fact that with such a minute channel through the growth the patient was able to drag on a more or less miserable existence for a considerable time, the long history of partial obstruction extending over many years, the duration of the interval that elapsed between the onset of the final attack of complete obstruction and the operation, and the comparative rarity of malignant disease of this part of the intestine.—Mr. HULKE said that in cases in which it was impossible to administer an anæsthetic on account of fæcal vomiting he had seen great benefit follow emptying the stomach with a syphon and washing it out with a weak solution of boric acid; after this the anæsthetic could be given without risk.—Mr. LANE said he had not found so much benefit follow this manœuvre; fluid from the intestines rapidly reaccumulated in the stomach, and would flow freely away from an œsophageal tube left in during the operation.—Mr. SYMONDS referred to a case under the care of Dr. Goodhart on which he operated and found a tumour of the small intestine as large as two fists, which he then regarded as malignant. As the whole of the mesentery was thickened and infiltrated with growth he could not excise it, and therefore opened the small intestine above the tumour. Two years had since elapsed; there was a small fistula in the groin and the tumour had disappeared. The subsequent progress of the case showed that it could not have been malignant.—Dr. HADDEN, referring to the case related by Dr. Roper and Mr. Lane, remarked that it was very unusual for obstruction of so many years' standing to be due to a malignant growth.—Dr. ROPER, in reply, said that the vomiting was so severe that it prevented an anæsthetic being given. He thought the case related by Mr. Symonds was an instance of tubercle.

PROVINCIAL MEDICAL SOCIETIES.

LEICESTER MEDICAL SOCIETY.—At the first meeting of the session the PRESIDENT (Mr. C. F. Bryan, M.R.C.S., L.R.C.P.) took as the subject of his address Arsenic as a Prophylactic. Arsenic, he said, when given internally has a tonic influence on the nervous system and stimulates the heart, as is observed in the arsenic eaters of Styria, who are able, after becoming accustomed to it, to consume large quantities, and they also teach their children to eat arsenic from an early age. This is done with the view of "improving their wind," and so enabling them to ascend the high mountains which abound there without any difficulty. These arsenic eaters assert that it prevents illness. It had been stated that those who are taking arsenic are insusceptible to vaccination and to the incidence of small-pox. He also drew attention to the remarkable power of arsenic to arrest scarlet fever, and cited an instance in which more than twenty children of a workhouse school were struck down with disease. The president gave particulars of several cases of infectious disease from his private practice, in which he had administered this drug as a prophylactic, evidently with success. The cases included scarlet fever, diphtheria and influenza. He concluded—"I feel sure also that there is a grand field for observation of the use of arsenic in surgical cases, and I have no doubt in my own mind that if surgeons would only prepare their patients for a few days previously to a severe operation with small doses of arsenic the results would be even far better than they are now. I may add that, if given in the liquid state, I generally use something of this kind, which is pleasant to take and is liked by children: Liq. arsenicalis, twenty-four minims; syrup. aurantii, half an ounce; aqua to three ounces; two teaspoonfuls to be taken three times a day after meals, and after the first week twice a day. Now, gentlemen, I have pursued this treatment for the last ten years whenever it was practicable, and I most strongly recommend you to give it a fair trial, feeling sure that you will be able to substantiate what I have laid down—viz., that in arsenic we have—shall I say?—a perfect prophylactic in most infectious diseases."

MANCHESTER PATHOLOGICAL SOCIETY.—A meeting of this Society was held at Owens College on Wednesday, Nov. 9th, Dr. J. S. Bury, President, in the chair.—Mr. W. COATS showed a young woman aged twenty-three the subject of Melanotic Sarcomatous Growths.—Dr. NATHAN RAW exhibited specimens, with drawings, of a Lung the seat of Extensive Pulmonary Fibrosis, occurring in a syphilitic subject.—Mr. SOUTHAM showed a complete Cast of the Bladder, from a case of Exfoliating Cystitis, passed per urethram by a female. For some weeks previously she had suffered from a severe attack of cystitis, apparently due to the irritation

caused by wearing a pessary. After the expulsion of the cast or false membrane the symptoms gradually subsided and the patient made a complete recovery.—Dr. REYNOLDS exhibited a large Aneurysm involving the whole Thoracic Aorta, measuring nine inches long and six inches wide. It contained clot weighing 3lb. Death was due to rupture into the trachea.—The following card specimens were shown: Dr. ASHBY: Cultivations of Streptococci from Blood of a case of Malignant Endocarditis. Dr. HARRIS: (1) Lympho-sarcoma of Mediastinal Glands, infiltrating Lung; (2) Extensive Endarteritis in a Syphilitic Subject; (3) Aortic Atheroma producing Partial Obliteration of Innominate and Left Carotid Arteries; (4) Old Hydatid Cysts of Liver. Dr. KELYNACK: (1) Chronic Perforative Appendicitis; (2) Lympho-sarcomatous Tumours in Mesentery of Vermiform Appendix. Dr. LEA: Trachea and Bronchial Diphtheritic Casts. Dr. WILLIAMSON: Microscopic Sections of Nerves showing extensive Peripheral Neuritis from a case of Alcoholic Paralysis.——A meeting was held on Nov. 16th, Mr. F. W. Jordan, Vice-president, in the chair.—Dr. MILLIGAN made some observations upon the operation of Excision of the Auditory Ossicles in cases of Chronic Suppurative Middle-ear Disease. The operation was performed for two reasons: (1) To rid the middle ear of any existing focus of disease and to secure thorough drainage; and (2) to improve the condition of the hearing power. The anatomy of the middle ear was briefly sketched. The *modus operandi* of the operation was then described. In order to illuminate the field of operation, which is always very small, the light may be taken from an electric forehead lamp or from a limelight apparatus. A case was shown in which the operation had been performed with marked relief to the patient. The patient, a girl aged seventeen, had suffered from a severe attack of measles at the age of seven. At that time the left ear began to discharge and had continued discharging for ten years. Attacks of severe earache were frequent. Tinnitus was constant and attacks of vertigo common. The hearing power upon examination measured only $\frac{6}{60}$ of the normal, and whispered conversation was inaudible on the affected side. The membrana tympani was found perforated in the anterior portion of Shrapnell's membrane and also in the posterior segment of the membrana vibrans. Granulation tissue protruded through both perforations, and a spot of caries was demonstrated on the head of the malleus. For five months careful local treatment was adopted. The granulations were removed and local applications made to the diseased areas. The suppuration, although diminished, was by no means entirely checked. The patient was accordingly put under chloroform and the remnants of the membrane and the carious malleus removed. Suppuration was arrested almost immediately afterwards. The hearing power increased from $\frac{6}{360}$ to $\frac{1}{100}$ of the normal. Whispered conversation could be heard at five feet from the ear. All pain and tinnitus had ceased. In addition there was almost complete formation of a new membrane two months after the date of operation.—Mr. F. W. JORDAN described a case of Intestinal Concretion of peculiar character. An independent gentleman, stout, and leading a sedentary life, had a severe attack of peritonitis, localised in the vicinity of the hepatic flexure of the colon, in the spring of 1890. In the summer of 1891 he had an attack of herpes zoster, one of the patches of which ultimately formed a large carbuncle on the back. While this was in progress it was discovered on August 14th that his abdomen was greatly enlarged owing to the existence of a tumour. When sketched on the patient's abdomen it presented the appearance of a large tumour with a narrow part or neck. The right hypochondrium was dull on deep percussion, which was thought to be due to a deep-seated portion of the tumour. There was dulness all over the tumour, which was close to the abdominal parietes. It felt quite solid and moved with respiration; its surface was smooth and in shape nearly globular, though not quite, for it was inclined to be square at the lower part. The acute symptoms soon passed away and by the beginning of September the tumour had become smaller. He took cold and had sciatica in a mild form. For this he visited Bath and while there, in the middle of October, was seized with acute abdominal pain which lasted some hours; he had jaundice for a few days. He remained well, complaining for a time of the sciatica and occasionally of gastro-hepatic derangements and constipation. On March 29th of the present year he was ill with general malaise, disordered liver, scanty dark-coloured urine loaded with pink urates; and with one of his evacuations he passed a large concretion. At the present time his liver is still enlarged, but not to the same extent as before. The concretion weighed six drachms, it was one inch and three-quarters long by one inch and a quarter broad; it was cylindrical in shape and irregular, as if it had been subject to pressure while in a soft state and pointed at one end; the other end was blunt and evidently broken off from another piece and has a conchoidal fracture. On section the concretion was seen to be made up of a large gall stone, having a thin coating of brown substance (cholesterin stained brown). The structure was such as to make it evident that this gall stone had been in close proximity with another one, end to end, and that the two had become fused together by further deposition of biliary matter. With regard to the tumour, the general shape of it, the history of the case, the probabilities, the absence of jaundice, and the continual presence of bile in the stools pointed to a distended gall bladder.—Dr. MORITZ showed two patients, twin sisters, twenty years old, who were both affected with Papillomata of the Larynx. The parents, as well as the other six brothers and sisters of the patients, were healthy. The theory which had been advanced that papillomata of the larynx might be caused by the inhalation of amniotic fluid mixed with gonorrhœal discharges during birth found in these cases no support, as the mother gives no history of fluor albus and the patients had no ophthalmia neonatorum. One of the patients began to suffer from hoarseness when two years old; in her case the larynx was found almost filled up with papillomata, and, though the voice was not completely aphonic, she suffered from considerable dyspnœa. The papillomata sprang from the right vocal cord, the right ventricle and ventricular band. The other patient commenced to suffer from hoarseness when eighteen years old; she was completely aphonic, and also in her case the right vocal cord was affected, presenting several papillomatous excrescences on its upper surface and along its free margin. Dr. Moritz showed the growths which he had removed by means of a forceps of his own design, for which he claimed several advantages, with the result that the patients now had fully recovered their voices, though in one of the patients, who had not been seen for two months, a small papilloma had recurred.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—At the meeting on the 16th inst. (Mr. R. C. Chicken, President, in the chair) Dr. BELL TAYLOR read a paper entitled "Vivisection: Is it justifiable?" He said that any advance which we might hope to make in the direction of civilisation, any step towards the amelioration of the evils of existing conditions, would be mainly by way of the recognition of rights, not only of men, but also of those poor relations whom we call animals. The exigencies of our nature compel us, no doubt, to kill certain animals for food, and also in self defence, but nothing could justify deliberate cold-blooded and prolonged torture of any of them.—Dr. WM. RANSOM pointed out that the successful treatment of disease depended on knowledge of function and structure. Physiology had been advanced by experiment on animals—e.g., our knowledge of the circulation, respiration and the functions of the nervous system. By the same means the pathology of nervous diseases, the rationale of cardiac murmurs, the nature of inflammation, of myxœdema and of many infective diseases had been elucidated. Improved pathological knowledge had been an indirect gain to treatment.—Mr. HATHERLY said that while not advocating the total suppression of vivisection, or agreeing with all Dr. Taylor had said, he still considered Pasteur's treatment for hydrophobia had been an utter failure.—Dr. WATSON said Dr. Taylor's facts and arguments were the same which were served up at every anti-vivisection discussion, wherever occurring. He corrected Dr. Taylor's allegation that there was nothing to prevent an investigator repeating experiments which had been performed before.—Dr. CATTLE said Professor Horsley's experiments on monkeys had succeeded in proving the relation of the thyroid to myxœdema and settled many moot points in the space of a few months.—Dr. RANSOM proposed, and Dr. CATTLE seconded, a vote of thanks to Dr. Taylor for bringing the subject before the Society.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.—At the meeting held on Nov. 10th (Dr. T. Oliver, President, in the chair) Dr. ROBERTSON brought before the members a man in whom he had drained the Antrum of Highmore on each side, on account of old-standing disease; also a patient on whom a similar operation had been performed with a good result on account of ozæna.—Mr. PAGE showed (1) A man successfully treated for Ununited Fracture of Femur by sawing off ends of bone and putting up without

suturing the bone; (2) a man treated for United Fracture of Humerus by silver wire suture; (3) a lad of fifteen whose Kidney had been Removed for Hydro-nephrosis; (4) a woman whose Kidney had been Removed for Pyo-nephrosis of two years' duration—nephrotomy was first performed, and as soon as the patient's health was somewhat improved the kidney was removed; (5) a woman with very large Umbilical Hernia on whom a "radical cure" had been performed; (6) a man with Malignant Disease of Stomach where gastro-enterostomy had been performed—the patient had improved considerably; (7) a patient from whose jaw a large Bony Tumour had been removed; (8) two patients on whom Helsted's operation for radical cure of large Inguinal Hernia had been done with very good results.—Dr. GEORGE MURRAY showed a woman with a complicated form of Spasmodic Torticollis; she had suffered from chorea on more than one occasion.—The PRESIDENT showed a man who nine years ago received a Compound Depressed Fracture of the Skull. Latterly he suffered from left-sided epileptiform fits, followed by unconsciousness and then mania. He had been treated with large doses of bromide of potassium and had had no return of his attacks for some time. The President also showed a boy aged fourteen, with general venous distension and œdema. He regarded it as due to a cardiac lesion, with enlargement of mediastinal glands.—Dr. HUME showed a patient whose kidney he had removed. The kidney was extensively disorganised and contained many calculi. Dr. Hume also showed a man who was admitted, suffering from advanced epithelioma of the tongue. Through a long incision on each side the lingual arteries were ligatured and the submaxillary and their accompanying lymphatic glands removed. The result obtained was highly satisfactory.—Mr. WILLIAMSON showed a boy who, two years ago, suffered from suppurative osteo-myelitis of the tibia. An incision was then made from one epiphysis to the other, the bone sawn across and removed. The leg was now as strong and useful as the other.—Dr. D. DRUMMOND showed a woman aged fifty, suffering from pseudo-bulbar paralysis.—Dr. LIMONT showed a girl aged fourteen, suffering from extensive favus of the scalp of eight years' duration.

PLYMOUTH MEDICAL SOCIETY.—A fortnightly meeting was held on Nov. 9th in the Society's library, Mr. Leah (President) in the chair.—Dr. L. FOX exhibited his case of Myxœdema, the notes of which were published in THE LANCET. The woman now walks briskly, syllabic speech has given way to quick utterance and the peculiar facies and hands are little marked. She continues to take extract of thyroid gland once a fortnight.—Mr. A. C. RENDLE showed a specimen of Sarcoma (?) in the Lower End of the Femur of a man aged twenty-seven.—Mr. LUCY showed (1) a Kidney, the seat of "primary cancer" removed from a child aged two years; and (2) a kidney with well-marked cloacæ, leading through the thinned cortex into ragged tuberculous abscesses of the medulla, removed post mortem from a man aged thirty-seven.—Mr. THOMAS exhibited for Mr. Swain (1) a piece of encrusted gum-elastic catheter removed suprapubically from an old man; and (2) a cast of a case of Dislocation upwards and forwards either (most probably) of the scaphoid or the trapezium and trapezoid, a luxation hitherto not mentioned in surgical classics.—The annual meeting took place on Nov. 16th, Mr. Leah (Stonehouse), the retiring President, taking the chair. The following office-bearers were elected:—President: Thos. Leah, M.R.C.S., Stonehouse. Honorary Treasurer: J. Elliot Square, F.R.C.S. Honorary Librarian: C. E. Russel Rendle, M.R.C.S. Honorary Secretary: R. H. Lucy, F.R.C.S. Library Committee: The President, Honorary Treasurer, Librarian and Secretary *ex-officio*, and Messrs. Rendle and Woollcombe. New members: Messrs. J. H. S. May, G. F. Aldous and R. S. Thomas, Plymouth; R. B. Mole, Callington; and J. H. Gough, Horrabridge. It was decided to admit members residing beyond five miles from Plymouth on payment of the annual subscription only. Twenty-three members and the following guests—Fleet-Surgeon Ellis, R.N., Surgeon-Captain F. B. Mathias, A.M.S., and Mr. Elliott—subsequently dined together. The Society has acquired a library and a reading-room of its own in Athenæum Chambers, George-street, in which, during the winter, fortnightly meetings will be held, alternately "clinical" and for the reading of papers, with discussions.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.—At the meeting on Nov. 10th Mr. Snell, the President, exhibited his new ophthalmoscope, after which a discussion took place on Anæsthetics. Dr. PORTER and Dr. CLEAVER read papers on the subject. Referring to the administration of ether, Dr. Porter deprecated giving this anæsthetic too rapidly, as likely to favour excitement and struggling. In using Clover's inhaler he always allowed from four to six minutes for the induction of complete anæsthesia. He dwelt particularly on the maintenance of perfect quiet in the room as the best safeguard against excitement. When once the stage of voluntary resistance was passed the sooner complete muscular relaxation was attained the better. Dr. Porter then went into the question of the relative mortality from chloroform and ether, quoting statistics, and submitted that the mortality from chloroform was increasing. The conclusions of the Hyderabad Commission, and the experiments of Drs. Gaskell and Shore, and of Dr. McWilliam, were specially referred to in connexion with the action of chloroform and ether. Finally, some reasons were given for thinking that circumstances might have contributed to render chloroform less safe in the aggregate than it was forty years ago. Dr. CLEAVER then read a paper on the Advantages of Chloroform as an Anæsthetic, in which he stated that after twenty-eight years' experience, during which he must have given chloroform many thousands of times, he had only come across one death. Dr. Cleaver never attended to anything outside the respiration and left the pulse entirely alone. Chloroform was potent for good if properly handled; more powerful for evil if misused. In the discussion which followed Mr. W. F. FAVELL strongly urged the necessity of systematic practical instruction in giving anæsthetics. Mr. GARRARD (Rotherham) had used anæsthetics largely for twenty years both in hospital and private practice. He thought that the Medical Council should demand evidence of efficiency in giving anæsthetics. Dr. SINCLAIR WHITE and Mr. FRANK HARRISON continued the discussion. Mr. COOMBE expressed a general preference for ether to chloroform. He attended to the state of the pupil as well as to the respiration during chloroform anæsthesia. Dr. Keeling and Mr. Snell joined in the discussion. Mr. CHICKEN, President of the Medico-Chirurgical Society of Nottingham, expressed the great pleasure and profit he had derived from the papers and the discussions. Personally, and in the absence of special conditions, he preferred to operate on a patient under chloroform rather than ether. There was less hæmorrhage and less vascular excitement, and the patient always seemed so much quieter. He asked the advocates of chloroform, before condemning ether, to be sure that their sample was thoroughly good. On the motion of Dr. ARTHUR HALL, which was seconded by Dr. MARTIN, the discussion was adjourned till next meeting.

GLASGOW OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—At the meeting held on Nov. 23rd (Dr. Pollok, President, being in the chair) Dr. MURDOCH CAMERON showed a Dermoid Ovarian Cyst, several small Fibroids and a Uterus with a mass of small fibroids in its walls, all removed from an unmarried woman, aged forty-eight years.—Dr. ROBERT JARDINE read notes of 1028 Confinement Cases, being the report of two years' work at a branch of the Glasgow Maternity Hospital; 932 were confined at full term, 65 prematurely and 31 aborted. There were 13 cases of twins. The operative cases were—forceps, 63; version, 10; craniotomy, 1; induction of premature labour, 1. Full notes were given of the 5 fatal cases. There were 7 cases of accidental hæmorrhage and 1 of marginal placenta prævia treated successfully. There were 6 cases of post-partum hæmorrhage and 2 of eclampsia. He induced premature labour at seven and a half months; in 1 case with a conjugate of 3″ and in another of 2¼″ he did craniotomy. The placenta was adherent 16 times; syphilis he believed to be the most frequent cause.—The PRESIDENT said he never gave ergot to assist labour, but frequently used it just as the head was on the perineum. In severe hæmorrhage he never gave it, as he considered it had a very depressing action upon the muscular fibre and might extinguish the efforts of a flickering heart.—Dr. S. SLOAN congratulated Dr. Jardine on the low mortality, considering the nature of the work. He preferred aseptic to antiseptic midwifery.—Dr. M. CAMERON said it was rare to find the perineum tear from the anus. He believed the long, straight forceps was very apt to plough up the perineum. The best treatment in septic cases was proper and frequent douching of the uterus with perchloride. Abortions and hæmorrhages, he believed, were very frequently due to syphilis. He always interfered early in all cases of hæmorrhage.—Dr. RICHMOND said the small number of placenta prævia cases and craniotomies agreed with his experience of twenty-five years' work. He had only had some two or three cases of puerperal fever, and he took no elaborate precautions and used no antiseptics.—Dr. JARDINE, in replying, said that he was not aware of there having been any more than five deaths

Reviews and Notices of Books.

The Artificial Feeding and Food Disorders of Infants. By W. B. CHEADLE, M.A., M.D., F.R.C.P. Second Edition, Revised and Enlarged. London: Smith, Elder and Co. 1892.

WE are glad to see a second edition of Dr. Cheadle's work. It fills a niche in medical literature, and fills it well. The present edition "has been revised throughout and some new matter added to the text, more particularly with regard to the sterilisation of milk, the relation of eruptions of the skin to diet and other points of practical interest." Dr. Cheadle sums up the essential conditions to be observed in the diet of infants as follows: (1) The food must contain the different elements in the proportions which obtain in human milk; (2) it must possess the anti-scorbutic element; (3) the total quantity in twenty-four hours must be such as to represent the nutritive value of from one to three pints of human milk, according to age; (4) it must not be purely vegetable, but must contain a large proportion of animal matter; (5) it must be in a form suited to the physiological condition of the digestive function in infancy; (6) it must be fresh and sound, free from all taint of sourness or decomposition. In view of the discrepancies existing between the standard analyses of human milk the author has thought it well to have the subject thoroughly investigated anew. Accordingly, Dr. Luff has made careful analyses of twelve different samples of human milk. "Every element has been estimated directly by the latest and most exact method. In no case has the amount of an ingredient been estimated by mere difference, as has been the general practice in previous analyses." The proportions found are as follows: Proteid, 2·35 per cent.; fat, 2·41; lactine, 6·39; lime, 0·019; phosphoric anhydride, 0·026; other constituents of ash, 0·295; water, 88·51. These proportions differ materially from those of Payen and Gorup-Besanez. Dr. Cheadle deals very fully with the difficulties encountered by the infant in the digestion of cow's milk, and gives various suggestions for overcoming them. He finds the various kinds of milk, as regards the easy digestibility of the curd, to rank as follows: (1) Peptonised milk, (2) cow's milk with barley water, (3) cow's milk with lime water, (4) cow's milk with bicarbonate of soda, (5) condensed milk, (6) boiled cow's milk undiluted, (7) fresh cow's milk undiluted. The various artificial foods are fully considered and their several advantages and defects carefully pointed out. He discards veal-tea altogether as a diet, has no high opinion of beef-tea, but recommends raw meat-juice strongly. The various diet-diseases of children are dealt with in detail. The style of the writing is good and the arrangement of the type conducive to easy reading. We feel sure this volume will prove of much practical value to all practitioners who are largely engaged in dealing with children's diseases.

Chemical Lecture Experiments. By G. S. NEWTH, F.I.C. London: Longmans, Green and Co. 1892.

THIS work is a useful *repertoire* of experiments for the lecture table, of which no account has been introduced upon the authority of a verbal or printed description; but each experiment has been the subject of the author's personal investigation, and the whole of the woodcuts used for illustration with the exception of three have been made from original drawings. The book contains no less than 632 experiments, all admirably described and of the kind which are calculated not only to excite the student's interest but to clearly point out to him the lessons which they are intended to convey. The scope of the work is limited to inorganic chemistry, but excellent chapters are to be found at the end of the book on experiments on dissociation phenomena and the liquefaction of gases, followed by instructions on the use of the lantern for purposes of illustration. The appendix contains valuable data, like the absorption equivalents of various bodies for certain gases, the critical temperature of gases, the temperatures of dissociation and so on. Experiment No. 326 is as interesting as it is simple, and we quote it as a type of the rest. It is devised to show the influence of suspended matter upon the formation of fog. A large flask is exhausted of its air by means of the air pump and air is allowed to re-enter through a glass-tube containing a plug of cotton-wool. When the flask has thus been filled with air comparatively free from particles one or two strokes of the pump are made, and the cooling effect of the sudden expansion of the air within the flask will result in the deposition of moisture in the form of a fine rain. If now unfiltered air be allowed to replace that removed by the pump and the experiment be once more performed, a dense fog will immediately make its appearance, which will continue for some time. If a trace of coal-smoke or fumes from burning sulphur be substituted, it will be seen that the fog then produced will be much more permanent than the former. Mr. Newth's book undoubtedly fills a gap, for a really trustworthy record of experiments for lecture demonstration and other purposes has long been required. It will be especially valuable to the student of chemistry, whilst to the lecture assistant such a book is simply a *sine quâ non*.

Roaring in Horses: its Pathology and Treatment. By P. J. CADIOT. Translated from the French by T. W. DOLLAR. London: Swan Sonnenschein. 1892.

THE title of this little work does not harmonise with its contents, which only deal with the surgical treatment of unilateral paralysis of the horse's larynx. This somewhat common morbid condition in the equine species is generally confined to the left side of the larynx, and the "roaring" is due to the falling forward and downward of the arytenoid cartilage on that side, thus narrowing the aperture for admission of air into the tube during inspiration—hence the "roaring" heard when the horse is moving at a fast pace. The displacement of the cartilage depends upon atrophy of its special muscle—a dilator of the larynx—which is brought about by some interference with the left recurrent nerve, the origin and position of which expose it to damage in more ways than one.

To remedy the roaring, extirpation of the arytenoid cartilage has been successfully practised, and it is to the operation itself that Professor Cadiot chiefly devotes his attention. The French veterinarians are very expert and bold operators, their boldness being mainly due, it is to be presumed, to their being excellent anatomists; and the author describes in a very methodical manner the different stages in the *manuel opératoire*, illustrating them by well-designed figures and giving full directions for the after-treatment. It is very probable that in the course of time this mode of relieving distressed horses and thereby rendering them useful will become popular, though the operation needs much skill and dexterity. Nevertheless, under chloroform the horse remains perfectly tranquil; and as accidents arising from the employment of anæsthetics on horses are exceedingly rare, there is no reason why the operation should not be resorted to—in at least severe cases.

Recueil de Mémoires, Notes et Observations sur l'Idiotie. Par Dr. BOURNEVILLE. Paris: Aux bureaux du *Progrès Médical*. 1891.

THE high authority attaching to the name of Dr. Bourneville in connexion with the subject of idiocy points to him as one peculiarly qualified to carry out the idea which this volume

embodies. This idea is to present the various views which have been held by different men as regards the nature of idiocy and also as regards the educability of idiots, so that it is really of the form of an encyclopædia on the subject. It may be thought that a better method would have been to present shortly and succinctly the views of the different authors who are allowed to speak for themselves—sometimes at considerable length, it must be confessed—but those who are particularly interested in the subject will be glad to have in such a volume as this easy and convenient access to authoritative statements by those who are entitled to speak with the authority which experience and research bestow. The editor has written an interesting preface, and we doubt not the work will be interesting to many, but chiefly to alienists.

LIBRARY TABLE.

Medical Microscopy: a Guide to the Use of the Microscope in Medical Practice. By FRANK J. WETHERED, M.D. Lond. With Illustrations. Pp. 412. London: H. K. Lewis. 1892.—This work is a very complete manual, containing all that a student need learn of the various modes of preparing and mounting sections and of examining the fresh tissues and fluids of the body. Dr. Wethered has been for some time past a teacher in the medical school of the Middlesex Hospital, and has therefore experience of the wants of students and of the best method of supplying them with the information they require. The first chapter is devoted to the microscope, which he rightly counsels should be simple in construction and should be solid, and be supplied with good adjustments and an immovable stage. A brief account is given of Abbé's chromatic condenser and camera lucida, and of various microtomes. The next chapter is devoted to the processes of hardening and decalcifying and of embedding in paraffin and celluloidin. Then follows an account of the different methods of staining, and the reader who requires the newest and best methods will not be disappointed, for in successive paragraphs Dr. Wethered gives the hæmatoxylin and eosin, the carmine and picric acid, the lithium, carmine, alum, ammonium and borax carmine, safranin, Bismarck brown, or vesuvin and litmus methods and the plan of treble staining. The sixth chapter is devoted to selective stains, amongst which he gives silver nitrate, gold chloride, osmic acid and methylene blue, and, in addition, Löffler's, Kühne's, Gram's, Weigert's, Neelsen-Zichl's and Gibbes' various methods. The processes for clearing and mounting are also given. The latter part of the work is devoted to the study under the microscope of the various animal tissues, organs and fluids, both normal and pathological, including therefore the blood, urine, fæces, sputum and other discharges. The three final chapters are devoted to the consideration of the cutaneous parasites, of food and water, and of bacteriological methods. The illustrations are both numerous and good. It is a very good volume of an excellent series.

Arrested Pulmonary Tuberculosis. By JAMES KINGSTON FOWLER, M.A., M.D. Cantab., F.R.C.P. London: J. & A. Churchill. 1892.—Within small compass and with exemplary directness and force Dr. Kingston Fowler adduces irrefragible arguments for the view that a large number of cases of tubercle of the lung undergo spontaneous arrest, and that in consequence to speak of phthisis and its stages leads only to confusion and error. He would discard the term "phthisis" altogether, and would group the cases of tubercle of the lung under the four heads of (1) pulmonary tuberculosis, which includes all the ordinary cases commonly spoken of as "chronic phthisis"; (2) miliary tuberculosis; (3) caseous tuberculosis; and (4) fibroid tuberculosis. There is much to be said in favour of this classification, which harmonises better with modern conceptions of the etiology and progress of phthisis, than the older and more vague nomenclature. But knowing the tenacity with which medical terms are held—even long after they have become obsolete—we fear it will be futile to look for a thorough change in this particular. Dr. Fowler next proceeds to analyse cases in which after death "obsolete lesions" evidently of tuberculous origin were met with. He has collected them from the post-mortem records of the Middlesex Hospital, and a large proportion of the examinations were made by himself. These cases are arranged in four series as follows:—

1. Cases in which death was due to a non-tuberculous disease ..	177
2. Cases in which death was due to acute tuberculosis	19
3. Cases in which death was due to pulmonary (non-tuberculous) disease	6
4. Cases headed "phthisis" or "chronic phthisis" in the reports which showed clear evidence of a period of arrest	17

The frequency of arrest is then deduced, and the processes whereby it is attained are described as (*a*) encapsulation by the formation of an inflammatory zone; (*b*) elimination, leaving a cavity with thickened walls, and (*c*) fibroid conversion of tubercle. The general inferences to be gathered from this admirable study are that tuberculous disease of the lungs is extremely common, that it is often arrested and plays no part in the after history of the case, and that the measures to encourage this beneficial change are those which improve the general health, or, in other words, fortify the powers of resistance to disease.

Influenza; its Pathology, Symptoms, Complications &c. By JULIUS ALTHAUS, M.D., M.R.C.P. Second Edition. London: Longmans and Co. 1892.—We owe the author of this really valuable contribution to medical literature an apology for so long delaying to notice his work, which is an extension of the *brochure* he published early in the year. Dr. Althaus seems convinced that influenza is a bacillary disease, and refers its phenomena in the main to the action of the toxine upon the nervous system. He is also a pronounced "contagionist." He has collated a large and interesting series of clinical facts which have been recorded in the recent pandemic; and doubtless when a third edition of the book is called for Dr. Althaus will be able to add still more to this part of his subject, and to embody in the work a notice of the collective investigations carried on by the Berlin Medical Society. The style in which the book is penned is clear and vigorous, and we have no doubt that it will occupy a foremost place amongst the monographs evoked by the recent visitation.

Archives des Sciences Biologiques. Publiées par l'Institut Impérial de Médecine Expérimentale à St. Petersbourg. Tome I., No. 3. 1892.—This number of the Archives contains an article by Dr. Blachstein, entitled "Contribution à la Biologie du Bacille Typhique." Working with recent cultures of bacteria isolated from organs of patients who had died from typhoid fever at the height of the disease, and with organisms taken from the fresh typhoid stools he has tried to determine whether the typhoid bacillus has any normal *habitat* outside patients affected with the disease and to find a good method for the bacteriological examination of drinking water. As a result of his investigations he maintains that neither the one nor the other presents insurmountable difficulties, but he finds (1) that the production of large or small quantities of carbonic acid in the typhoid fermentation has no importance as far as a diagnosis of the typhoid bacillus grown upon solutions of glucose is concerned; (2) that the formation of levi-rotary paralactic acid is a very important characteristic, especially in the case of those typhoid bacilli which have the faculty of determining energetic fermentation—these, of course, are the most important; (3) that typhoid bacteria isolated from a dead body are attenuated; (4) that as yet we have no satisfactory evidence as to the phylogenetic relationship between typhoid bacilli and those bacteria normally found in the intestine.

THE LANCET.

LONDON: SATURDAY, DECEMBER 3, 1892.

THE Medical Council is at least entitled to the credit of a short meeting. Notwithstanding the number of delicate and difficult questions it had to deal with, it sat only four days—that is, from Tuesday to Friday inclusive. This was partly due no doubt to the fact that many of these questions were postponed rather than settled, but even so there was a spirit of despatch in the Council which is to be commended. It is certainly true that short meetings are not always for the good of the public or the profession. But, on the whole, it must be allowed that, with several questions on the programme of the late meeting, the best thing to do, for one reason or another, was to postpone them. This was the case with reference to the reports of the Visitors and Inspectors of certain examinations. Dr. HAUGHTON, for example, was eager to be at the assailants of the Final Examinations in Dublin University. But the Council had not seen the answer of the body criticised, and neither on the report nor on the reply to it had the Examination Committee had time to comment. It is obviously desirable that these reports should be discussed while they are fresh in the memory of the visitors, and there is an advantage in taking them in groups rather than altogether. Accordingly a motion was passed which will require the Council to deal at their meeting in May with all the reports that are received by the end of March. So with the important question of the propriety of the licensing bodies dealing *primarily* with cases of misdemeanour or unprofessional conduct in their members before the matter came under the notice of the Council. This is an abstract question. But it did not arise in that form before the Council. It arose in connexion with an actual case now before the law courts. It was obviously proper to leave the abstract question over till the case of appeal has been settled. Another matter under discussion was the action of the Medical Council in respect of continuing its recognition of the preliminary examination of the Apothecaries' Society. The Education Committee was prepared to put pressure on the Apothecaries' Company to leave to other bodies the examination in preliminary subjects which it now holds, and in which it examines about 800 candidates a year, only a small proportion of whom take its licence. But the Medical Council as a whole, has always dealt tenderly with the Society of Apothecaries. Influential members, such as Sir JOHN SIMON and Sir RICHARD QUAIN, have saved it from the fate which outrageous fortune might have brought on it if it had been left to the tender mercies of other medical authorities in London. The Council, therefore, resolved still to temporise in recognising the examination, which serves as a portal to the profession, not only to those who take the licence of the Apothecaries' Society, but also to large numbers of those who proceed to the examinations of the English Conjoint Board, which is obviously unsatisfactory. When there is such a universal conviction that the best thing for the profession and the public is to hold high the standard of the preliminary examinations, it cannot be defended that the Apothecaries' Society should hold this great key. Even if its examination is not so lax as the high proportion of "passes" and the general run on the examination suggest, it is not reasonable to ask that other bodies should accept its standard. The real culprits who are guilty of letting into the profession those whose general education is grossly defective have yet to be detected. And there is evidence enough that other bodies, of whom more might be expected, are not without blame, but it is clearly desirable as a preliminary measure that the work should be thrown on bodies which have public sanction and responsibility in educational questions.

Sir WALTER FOSTER'S proposal that the Council should support the demand for an increase in the direct representation of England and Wales was rejected. It is to be regretted that this proposal, after a few short speeches on the subject, was shelved by the previous question. Whatever the objections of the majority of the Council to this step—some of which are not unreasonable, especially the argument that it would add to a Council already too large—it is one for which much has to be said, and was indeed well said by Sir WALTER FOSTER. It is scarcely courteous to extinguish such a debate by the use of the standing order which allows no further debate, and not even the reply of the mover of the resolution. Any animus against direct representation should not be shown, however much it may be felt.

The action of the Council in penal cases will be differently judged. There can be no doubt that the narrow but severe single weapon in the hands of the Council—that of erasure—and the uncertain and in some cases irrevocable action of the medical authorities exercised subsequently to that of the Council make the use of it extremely responsible. This is a point which the critics of the Council do not always take into consideration in charging the Council with undue levity. The whole subject will need further attention if the licensing authorities and the Medical Council are to act harmoniously and effectively. The intimation that the doctrine of "covering" will be applied to dentists who carry on business through the means of unqualified assistants will, it is to be hoped, have a salutary effect. The discussion on Dr. RENTOUL'S memorial on the subject of the certification of midwives by unauthorised societies will serve to elucidate a difficult and complicated subject. On the whole, the meeting was one of interest, and brings the Council more than ever face to face with the body and life of the profession from which it derives its existence and its importance.

A REPORT compiled by Dr. ASTLEY GRESSWELL, health officer of the Colony of Victoria, on small-pox introduced into Australia by the Royal Mail ss. *Oroya*, has especial interest at the present moment, for it indicates in a forcible manner just that which may be expected from reliance on a system of quarantine against small-pox even in the case of a country which is free from the infection and remote from other countries where the disease exists; it also sets out the compulsory measures which it is necessary to resort to where the quarantine system fails; and it shows how hopeless it is to attempt to deal with small-pox without recourse to vaccination.

The malady was first detected in the case of a man twenty-eight years of age, who was found to be ill in the Victoria Coffee Palace in Melbourne, and by the time he was ascertained to have small-pox the passengers were already scattered about in Victoria and neighbouring Australasian colonies. Great precautions are taken against the introduction of small-pox into Australia, a rigid quarantine is maintained against it, and Dr. GRESSWELL tells us that prior to the arrival of the *Oroya* there had been no case on the continent for several years.

The quarantine system failed in this instance under the very circumstances in which it may always be expected to fail—namely, by reason of an unrecognised case of small-pox in a person who, approaching adult life, had been once vaccinated in infancy. The patient was taken ill about fourteen days after leaving England; others having associated with her on board contracted the disease, and it was one of these latter who was detected with small-pox in Melbourne. Thus it happens that "in this instance the mechanism for preventing introduction of small-pox into Australia altogether failed." Instant measures had then to be taken to supplement the system that had failed, and the story is interesting in its details. Four constables were rapidly procured, two were placed in front and two in the rear of the coffee palace, and no egress was allowed except on the condition of submission to vaccination, which was carried on until midnight, when about sixty persons had undergone the operation. The police cordon was, however, maintained. The next morning the process was continued, and it was only on its completion that the cordon was removed. But by this time the whereabouts of the first patient had been discovered, only, however, after people living elsewhere had been in more or less direct contact with her. Strict instructions were once more issued "that no one, under any circumstances, was to leave the house." The police station was again requisitioned for a series of cordons round the implicated or suspected houses, and with the aid thus procured vaccination, with measures of disinfection, was once more resorted to; but even this did not check the mischief that had been already wrought by the one unrecognised attack of small-pox. As late as June 24th another person sickened, another police cordon was arranged, and much the same process was gone through, the actual patients being in each case removed to the quarantine hospital as soon as was practicable. The disease also extended to other colonies—notably to New South Wales, where four persons arriving by the *Oroya* and three of the residents were attacked.

We are thus provided with an example of that which may be anticipated wherever, under the plea of the liberty of the subject, no law as to compulsory vaccination is tolerated, or wherever any such existing law is repealed. We are told by a correspondent, Dr. CHARLES BAGE, of Kineton, Victoria, that compulsory vaccination has been the law of the land in Victoria for nearly forty years; but notwithstanding this he states that "quarantine is much relied on," and he cites an instance to show that inhabitants flee from houses where small-pox appears from "fear of quarantine." We hardly understand the relation in which the one form of compulsion stands to the other; we are only desirous of applying the lesson to ourselves; and so far as the police measures under which vaccination is enforced are concerned, we are forcibly reminded of the evidence given before the Royal Commission on Vaccination as to the state of affairs which goes on in the United States of America, to the laws of which so many of our own people look as their beau ideal of personal liberty. So long as there is no small-pox to be feared the inhabitants may do much as they like; the moment a dread of the disease appears vaccination is enforced under pleas and by measures which would never be tolerated in England. It becomes simply a case of "There is no compulsion, but you must." In the one country one method of enforcement is adopted, in the other the compulsion is carried out under the authority of the police. Thus, under the influence of panic and by resort to exceptional methods, an attempt is made to imitate the system of compulsory revaccination which in Germany is carried out in a rational and statesmanlike manner.

In a small way illegal measures of control have, under somewhat similar circumstances, already been resorted to in this country in places where vaccination is neglected; and it is this sort of thing in an intensified form that we shall have to look forward to if our Legislature should ever give heed to the demands of those who are fascinated by the contentions of people who talk loudly of the success of their quarantine when an odd family has to be dealt with, but who maintain a significant silence as to its failure when circumstances occur which in some slight way put the system to the test.

No one can fail to admire Dr. GRESSWELL'S activity and determination in the face of the danger he had to meet. We certainly shall not stop to ask how far the interferences with liberty to which the people were subjected were legal or the reverse; but we would carefully remember his warnings. The circumstances were favourable to the success of the measures which were resorted to; but he tells us that had exceptional promptitude not been practicable, the consequences would almost certainly have been that small-pox would have "extended rapidly," and so "the question of the endemicity of the disease in Victoria, and by reason in Australia, would again have become prominent." In fact, he admits that a similar success is not likely to be repeated; hence he urges his one prominent lesson, that the prevention of small-pox can be brought about "simply and solely by vaccination and revaccination." The experience in connexion with the *Oroya* comes to his aid in enforcing this vital part of his story. No person who had been successfully revaccinated contracted small-pox, notwithstanding exposure to infection. Of the children on board the vessel only one—a girl of five years old—had small-pox, and she "had not been vaccinated." Here we have one more proof of the value of a recent successful vaccination. Infancy and childhood are protected by the primary operation performed in the first few months of life, and adults are protected by submitting to a repetition of the protective process.

WE deal elsewhere with Professor FRASER'S remarks on the propriety of separating the study of the subject of materia medica proper from that of therapeutics, and on the respective place in the medical curriculum which these subjects should hold. Our present concern is rather with the question raised in the earlier half of the introductory address with which he favoured his class and which we published last week. This constitutes a veritable novelty, for which,

in the first instance, the Scottish Universities' Commission must be held responsible, but which seems to have the entire approval of Professor FRASER himself. The novelty has reference to the recognition by the Universities of Scotland of the tendency to specialism in the medical profession, and of the demand for it by the public, by the institution of a system for conferring degrees, or rather diplomas, in certain special branches of practice, a system foreshadowed in the ordinances in the following words: "Subject to regulations to be made from time to time by the University Court, the University may also confer diplomas in special branches of medical and surgical practice on graduates of the University in medicine and surgery." Hitherto when a student has shown special knowledge in the course of his University career, his University has recognised his merit by giving him a medal or other mark of distinction, and, later on, in the broad competition of life he has generally developed the special powers that were in him and justified the judgment of his teachers. Now the Universities propose to punish merit and to profit by it rather than to reward it; to subject their distinguished students at the end of the curriculum, and "*after the elementary training for the lower degrees*" (the italics are ours) "has been completed," to fresh studies lasting a year longer than the recently prescribed five years, and to one or more special examinations.

We regret that we cannot agree with the argument by which, as our readers will see, Professor FRASER justifies this new venture in University action. He himself says that to institute a "degree" for each special branch would be objectionable, because it would multiply degrees to an extent that would be detrimental to all degrees. But surely it is as objectionable to multiply diplomas as it is to multiply degrees, and for the same reason. The increase of specialism is rather an evil to be repressed than an advantge to be encouraged and fostered by Universities. It is not quite justifiable to say that the merits of specialism have been so admitted by the profession that the time has come for the Universities to stamp it with a series of special hall-marks. The profession has the greatest possible doubt about the advantages of any specialism save that which is the outcome of a man's own life and practice, and as such is recognised by his peers and his fellow-practitioners. A man who develops a gift for dealing with abdominal tumours or calculi of the bladder or kidney, or for treating diseases of the eye, must be reckoned with, and will always have accorded to him by his professional brethren the respect which he deserves, and of which they are the best if not the only judges. It is one thing to give a degree in one or other of the great branches of medicine and quite another to profess to send out raw young graduates ticketed with a label conveying a fictitious idea of their familiarity with highly technical branches of the medical art. Where is such a system to stop? Professor FRASER indicates that the medical faculty of his University has already expressed itself in favour of the creation of five special diplomas, respectively in ophthalmology, mental disease, laryngology with aural and nasal surgery, medical jurisprudence, and midwifery and gynæcology. This is a suggestive extension of the diploma-making business. If the ear and the nose are to be the subject of special diplomas, why not the liver, the heart, the stomach, the rectum, and "the big toe"? It is certain that these organs or parts have as many claims to special attention and that most of them play as important a part in the economy of the body as those which have been selected for diploma-making by the Faculty of the University of Edinburgh. The terms "hepatologist," "cardiologist" and "renalist" might take a few months to be "understanded of the people," but in the meantime the very strangeness of the titles would have its effect, and then the public would begin to think that there was something in it, and that these gentlemen with the new names ought to be consulted. Seriously we consider this to be a very questionable step on the part of the great University of Edinburgh. It would have done infinitely better service to itself and other Universities if it had resolved on strengthening the reputation of its present degrees and accentuating the difference between a degree and a diploma. Professor FRASER actually fastens by implication a kind of reproach on present degrees in comparison with these new inventions. They are to be the "lower degrees" for which only "elementary training is required"; the honours are to attach to the new diplomas! We venture to think that graduates of Edinburuh will not feel grateful to Professor FRASER for thus belittling the degrees which, as Select Committees and Royal Commissions have been assured, implied a higher training than that for ordinary qualifications. Universities can no longer stand on fine distinctions between degrees and diplomas, or on the multiplication of letters they can contrive to append to a graduate's name. If their *raison d'être* is to be maintained it must be by the higher standard required for their degrees, not by the creation of a distinction between "lower degrees" and superior (!) new-fangled titles, which will mislead the public and offend the profession. The proposals for new diplomas are as unfair to the graduates as they are unworthy of the University. The number of examinations is even now a serious evil; and it is proposed to add another torture to those already existing, and to turn out young men with "special qualifications for the practice of some selected branch of medicine or surgery," of which in the nature of things they have had a minimum of experience. The Scottish Universities have already as many students as they can cater for. Among them there are many men of whom they are specially proud and confident. Let them impose not a new examination on them, but some new reward. Above all let them look to the standard of their degrees in medicine and surgery that they be not "lower degrees," but true academic honours as distinguished from ordinary qualifications. If degrees are not this they are not what they pretend to be. And this leads us to the remark that the matter has a significant bearing on the grievance under which London medical students suffer. They are not able to obtain on reasonable conditions in London an M.D. degree, whilst Scottish universities propose to add to that coveted qualification the further attraction of a system of special diplomas. We commend the subject to the notice of the Royal Commission on the proposed Gresham University.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, N.E.—The Lord Mayor will preside at the Festival Dinner to be held at the Holborn Restaurant on May 9th next in aid of the funds of this hospital.

Annotations.

"Ne quid nimis."

THE PREVALENCE OF SMALL-POX.

SMALL-POX continues somewhat slowly to extend the area of its distribution. In Warrington, where the fresh attacks numbered 76 in the week ending Nov. 12th, the new cases were only 32 in the week ending Nov. 19th, and a further decline seems to be taking place. The inhabitants are hurriedly seeking revaccination, at a rate and on a scale that can hardly be kept pace with. Lancashire has several centres of infection, Manchester, Liverpool, St. Helens, Wigan, Salford, Oldham and Chadderton being amongst them. At Salford preparations are in contemplation to meet a possible extension of the disease into the borough. Leeds remains seriously affected. The existing hospital accommodation is occupied, and cases are under treatment in their own homes. Other Yorkshire towns, such as Halifax, Rotherham, Barnsley and Bradford, have also had fresh cases reported. In London a batch of ten cases has occurred in Islington, and one case was reported from Hackney. In Leicester a distinct abatement has taken place; only two cases were reported in the week ending Nov. 19th. Other fresh outbreaks or isolated attacks of the disease are heard of from Castle Bytham, near Bourne, and Dronfield.

THE FEEDING OF SCHOOL CHILDREN.

THERE can be no question that a child which from want of food is on the verge of starvation has neither mental appetite nor digestive power sufficient to deal with the material so freely and fully afforded by our national system of education. It is equally certain that many poor children who are now compelled to attend school are found to be, through no fault of theirs, in this destitute condition. We are thus brought face to face with an important social problem. Who is to feed these children? Social democrats at once answer the State, while others with as little hesitation throw back the burden of responsibility upon the defaulting or impoverished parents. We can hardly go wrong if we seek the true solution in a middle course. It would certainly be much more foolish than humane to indulge, and even to encourage, the culpable neglect of a careless parent by introducing any loose and general measure for allowing free meals at the cost of more active and provident members of the community, rich or poor. At the same time no one can stand by while children are being virtually crushed between the nether millstone of parental neglect and the pressure of grinding poverty. Compulsion if applied must not, it is clear, be limited to education. Working through parochial authorities it must wherever needful be made to energise the limp inaction of any who thus heedlessly desert their offspring, and it does operate in this way. In cases of excusable indigence the same power becomes a source of supply under our present system of parish relief, which, nevertheless, can hardly be expected to work without hindrance or omission, and thus it happens that a certain proportion of young school children are found to be simply starving under the eyes of their instructors. The school then becomes part of a machinery available for the detection of such want as lies within the province of parochial inquiry and amendment. Yet the actual work of amendment is to it no proper object of concern, and we fail to see how School Boards can be expected to undertake the duty of catering for bodily as well as mental sustenance. Any effort of this kind associated with the work of teaching should naturally therefore be accomplished by external agency—by the parish officials preferably—acting either upon or for the parent, or failing these, by voluntary charitable organisations. We may take it as a circumstance creditable on the whole to our character for self-help that many of the latter bodies introduced by the "penny dinner" movement of 1885, and now united by a central committee, have been and are doing excellent work in the interest of poor children. Conducted upon a principle which requires wherever possible a trifling payment, but still admits the justice of providing for every necessitous case, we do not think that the system thus organised could be improved upon by any more general and probably less discriminating application of State relief. Its past efficiency in the cause of the indigent, its concern for these alone, and the obvious need of such provision as it affords are its unfailing guarantees of character and its titles to continued success.

MUSIC AS A REMEDY.

THE connexion between music and medicine was discussed by Dr. J. G. Blackman at a recent meeting of the Portsmouth Literary and Scientific Society. The subject is one of interest both from a social and professional standpoint. In this instance it was regarded by the lecturer mainly in its medical aspect and was treated on similar lines to those with which readers of THE LANCET are familiar. The physiological foundation of musical therapeutics was examined and described as consisting in the power exercised by harmony over the vaso-motor function. Most will acquiesce in this view, which is also corroborated by the experiments of Riegel on the blood pressure and heart action during the performance of music. It follows naturally that the ailments most likely to be benefited by this means are those in which nervous disorder plays a leading part. A number of cases illustrating this point were quoted at the meeting referred to, and we should probably include among these one in which reduction of temperature followed the administration of "a dose" of melody. The violin takes high rank as a vehicle of the soothing property, and the other instruments best adapted to the treatment of disease by musical sounds were, in the lecturer's opinion, the harp and the pianette (not the piano), with which a few well-chosen voices might be advantageously combined. Dr. Blackman does not consider it feasible as yet to apply the musical method as above described in private practice, though he looks forward to its employment in hospital work, a hall being established in London where the services of musicians trained for this particular branch of their art might be obtained. While willing to admit the salutary effect of good music in many cases of nervous disease, we confess that an arrangement so elaborate does not seem to us to be called for by the exigencies of illness or justified by the importance of its probable effect. In any case of serious mental or bodily disorder the mild suasion of sweet airs must hold an altogether secondary place in the plan of treatment, and such as could usually be well filled with far less elaborate preparation.

COUNTY SANITARY ADMINISTRATION.

THE Bucks County Council had under consideration last week the question of the appointment of a sanitary committee. The subject was brought before the Council by Mr. W. F. Verney, who cited the excellent work done by some other County Councils, particularly Worcestershire, where Captain Sir Douglas Galton was chairman of the Sanitary Committee and Mr. Fosbroke medical officer of health. He also read a letter from Miss Florence Nightingale, who had written: "We hail the County Council as being or becoming one of the strongest engines in our favour, at once fathering and obeying the great impulse for national health against national and local disease." Mr. Verney was warmly supported by Mr. S. Osborn, F.R.C.S., who, speaking as a medical man, dwelt on the valuable work such a committee would be able

to do. He stated that in his own locality he had several times tested the water-supply of the poor people's cottages, and found it nothing better than diluted sewage. He combated the argument that such a committee would not have sufficient work, and said that if they did their duty thoroughly and efficiently they would find ample employment to justify their existence. One or two members of the Council objected, the argument being used that it would create friction with the sanitary authorities within the county. Eventually the debate was adjourned until the next meeting. We trust that this motion will be adopted. If a committee were appointed to consider the circumstances affecting the health of the several communities in the county, it would find ample material with which to deal, and certainly no fear of creating friction with the authorities ought to deter the Council from calling attention to any circumstance requiring the intervention of the proper authority. The effect of a committee in stimulating a more efficient sanitary administration would at once become obvious if it were made acquainted with the success attending the efforts of County Councils like those of the West Riding of Yorkshire, Staffordshire and Worcestershire. The Council might well remember that every sanitary authority contains some members who would be in sympathy with its proceedings, and they would be able to give a great impetus to any attempts made to secure improvement in the sanitary condition of the county.

DEATH AFTER VACCINATION.

ON Nov. 26th an adjourned inquest was held at the Town Hall, Chelsea, touching the death of a child aged one year and ten months, who had died after vaccination had been performed, about three weeks previously. The lymph employed was obtained from the calf, and another child was vaccinated with the contents of the same tube. The latter infant did perfectly well, so it is only fair to assume that the unfortunate issue in the case of the deceased was due either to purely personal conditions of health, or to some extraneous cause other than vaccine lymph. Dr. Luff watched the case for the Vaccination Commission. Mr. Corrie Grant, barrister, represented the friends of the deceased. It appears that vaccination had been postponed more than once on account of the weakness of the child. The clinical history of the fatal illness is briefly as follows: During the first week nothing unusual happened, for at the end of that period the medical man who vaccinated the child examined the arm and signed the case as "successful." Some days afterwards the wound inflamed and the two vaccination areas became confluent. Eventually convulsions supervened and the child became jaundiced and died from coma. Mr. Pepper, who made the post-mortem examination, deposed that the body was well nourished. The tissues were deeply jaundiced. Externally there were no signs of injury or disease except the jaundice aforesaid and an ulcer on the left arm. The latter was deeply excavated, was one inch and three-quarters by one inch in diameter and showed that the vaccination sores had run together. There were no granulations in the floor of the ulcer. The axillary lymphatic glands were much enlarged and congested, but suppuration had not taken place. The joints were healthy. Internally the organs were healthy except for recent acute changes, evidently due to absorption from the ulcer. The kidneys showed cloudy swelling. The spleen was greatly enlarged and softer than natural. There was hypostatic congestion of the bases of both lungs with commencing consolidation. The brain, heart, stomach and intestines were healthy to all appearance. No signs of tuberculosis presented themselves. Mr. Pepper gave it as his opinion that death was due to exhaustion from tissue change consequent on septic absorption from the ulcer on the arm. He considered the vaccination was not directly the cause, but that indirectly it was a factor, since it was the method by which the sore was produced in the first instance, and, moreover, the temporary disturbance of health due to vaccinia would somewhat enfeeble temporarily the child's strength. He came to the conclusion, however, that had the vaccination sores been kept clean and free from implantation of septic virus from without the issue of the vaccination would have been normal. Cross-examined by Mr. Corrie Grant, he said that from his observation it was not difficult to obtain calf's lymph free from blood, and that even if there was a slight admixture of blood and lymph it would not necessarily render the latter unfit for vaccination purposes. It was not the mere presence of blood that was harmful, but blood in a state of decomposition or infection with pathogenic germs. It was elicited during the inquiry that nothing but dry linen had been applied to the ulcer on the arm and that one of the child's attendants was suffering from ulcerated cancer of the breast. The jury found that the death was due to blood poisoning following vaccination, but how the blood poisoning was caused was not proved. They added a rider to the verdict blaming the mother and grandmother of the child for not paying more attention to the sore on the arm and for not calling in a medical man when the health of the deceased showed signs of failing. In our opinion the death was, so to speak, an accident, and we think that if strict antiseptic principles had been practised it might have been avoided. The negligence of the relatives of the child was clearly due to ignorance and not to wilful negligence.

TREATMENT OF OPHTHALMIA AMONGST THE CHILDREN OF THE POOR.

WE have had on several occasions to comment on outbreaks of ophthalmia at various metropolitan schools. The serious results of admitting even a single child suffering from ophthalmia to free intercourse with healthy children was shown in the case of the *Goliah* training ship at Grays, and when many are affected it is very difficult to know what to do with them. It is impossible to confine them for many weeks consecutively to the infirmary, and yet the managers of the school naturally hesitate to incur the expense of a special medical attendant and a staff of nurses, and the still greater expense of building sheds or other accommodation for what appears to them to be a comparatively trifling ailment and one likely to prove only temporary. It is only by slow degrees that the conviction is forced upon them that such a course is necessary, and by that time a very considerable number of the children have become affected. A large building is then at last constructed, a medical officer and nurses are appointed, and when treatment has been continued for a year or more the disease is practically abolished. Then comes the question—What is to be done with the building when there are no patients to occupy it? The medical officer and the nurses can indeed be dismissed, but the building must be kept up in some fashion. This difficulty has presented itself to the managers of the Central London School District, and we think that they have returned a sensible answer to the proposal of the Local Government Board that the vacant accommodation at the ophthalmic school should be made available for the reception of children from other unions and parishes upon terms which would enable the managers to ensure adequate accommodation for cases within their own district if increased need should arise. The report contains the following recommendations: "It is evident that in appropriating a building designed for 400 children to a total population of 111 only (and which it is to be hoped will be a steadily diminishing number) there must be a serious loss of space accommodation, to say nothing of the expensive staff necessarily kept up even for the reduced numbers; but having regard to the difficulty already experienced of exercising a complete supervision over the ophthalmic department, and to

the probability that the amount to be reasonably charged to other unions for children sent by them would not afford any sufficient recoupment towards the very large expense of keeping the same up as a permanent isolation school, we feel unable to recommend the managers to acquiesce in any such arrangement. At the same time it is much to be regretted that a building which seems well adapted for the treatment of ophthalmia cannot be made available to relieve other unions and parishes of their ophthalmic cases; and seeing that there is every facility for making the isolation school establishment distinct altogether from the Central London District School with separate approaches, we recommend that the Local Government Board be informed that, whilst not seeing their way to adopting the suggestions of receiving children suffering from ophthalmia from other establishments, the managers would be prepared to entertain a proposal for disposing on equitable terms of the ophthalmic building, with a sufficient portion of land for the purposes of an institution for ophthalmic cases under separate management and authority, to which institution the guardians of the unions now comprising the Central London School District might send their children suffering from ophthalmia in common with children so suffering from other unions and parishes in the metropolis."

NOTIFICATION PROCEEDINGS AT BRADFORD.

THE editor of the *Bradford Daily Telegraph* publishes the following announcement in his issue of Nov. 23rd:—"I have been requested on behalf of the Sanitary Committee to warn the local doctors of the possible consequences which may follow from a neglect of the duty which the law lays upon them. The authorities will not permit the regulations to be treated as a dead letter, and are determined to prosecute the first doctor to whom they can bring home a charge. In the meantime, in the view of the great increase in scarlet fever, their inspectors have received instructions to make inquiries in all parts of the borough with the object of bringing to light cases independently of the medical reports, and collecting evidence for possible prosecutions." We sincerely trust that the editor is labouring under some error, both as regards the delegation to him by the Sanitary Committee of the Town Council of any such instructions and also as regards the intentions and measures which that committee have in prospect. We can hardly conceive of anything much more insulting to the medical profession of the borough in question.

MEDICAL OFFICERS OF HEALTH IN CORNWALL.

IT is not without hesitation that we comment somewhat critically upon the attitude of the chairman of the Cornwall County Council towards the medical officers of health within the county, our hesitation being due to the obvious desire of the chairman to get all the information he possibly can with a view to effecting improvements in the state of public health within the county. Mr. Trevail tells the officers that all reports should be in pica type, to save the medical officer of health the trouble of writing five copies—a requirement which we never heard of before. The truth seems to be that the Council want three copies instead of the one they are entitled to. Then, again, Mr. Trevail has compiled a series of questions covering four closely printed sides of foolscap as to which he wants answers. Here, again, he goes entirely beyond anything he has a right to ask, and any medical officer of health who supplies all the details set out, even down to the price paid for notifications, will have a somewh serious task to perform. Mr. Trevail admits that many of the officers are ill-paid even for the duties they have already to perform, but he holds out the bait to them that, "be the pay as low as it may," the readiest way to get it remedied is to show that the officer has in nowise neglected his duty. What duty is here referred to we do not quite gather, for the work Mr. Trevail wishes to impose upon them is not amongst their duties. We have much sympathy with Mr. Trevail, and we do not know whose influence it is that has kept the county from appointing a county medical officer of health. But it seems to us that all this is an effort to make up for such an officer by getting the local officers to supply gratuitous information to the chairman, who hitherto has taken upon himself work which the statutory appointment of health officer would have rendered unnecessary. In view of Mr. Trevail's reference to inadequate payment for skilled services, all notion of economy in the failure of the Council to make such an appointment may, perhaps, be set aside.

CHOLERA PRECAUTIONS IN THE CITY.

WE find that Dr. Sedgwick Saunders is making preparations for the possible recurrence of cholera next year. He has three proposals under consideration for cholera hospital provision. Two relate to land hospitals, one site being an unoccupied area on the Thames Embankment, the other one in Golden-lane. The third proposal has to do with a floating hospital somewhere between London Bridge and Waterloo Bridge, and to this Dr. Saunders evidently inclines. Subject to the consent of the Conservancy Board and other interested bodies and to the provision of facilities for a landing stage or wharf, this latter scheme seems to be the one which will present fewest difficulties.

THE PROGRESS OF SURGERY.

IN opening the Section of Surgery in the Royal Academy of Medicine in Ireland Mr. Edward Hamilton delivered an address on the Progress of Surgery. The most noticeable points in the address were a vindication of the study of anatomy, which, he said, there was a tendency to neglect, on the ground not only of its uses to the surgeon, but as a means of training to the mind. The progress of surgery rested now securely, he thought, on three points—anæsthesia, antisepticism and experimental research. In the matter of anæsthetics his conviction is decidedly in favour of ether for adults and chloroform for children. That his hearers should not be exalted above measure by the great progress of surgery, he reminded them of remaining opprobria, in the fact that cancer and tubercle were still incurable, and that little progress had been made in the cure of syphilis since Hunter said: "if there is such a thing as a specific at all, mercury is a specific for the venereal disease." He guarded his hearers against two abuses of it—the old terrible overdosage and the present fault of using it timidly and leaving it off as soon as it is about to produce good results. He emphasised the value of "hygienic treatment, good air, good food, early hours, temperance in all things, the Turkish bath, and the blood-making property of cod-liver oil."

THE MEALS OF LADY CLERKS.

IT will be generally allowed that the position of young ladies engaged in business in the City of London is not usually one of superfluous ease. The strain of occupation is fairly continuous and prolonged. Its intermissions are brief, not always regular, and limited as a rule to meal times. There need be little wonder, therefore, if those most nearly interested in this matter should feel aggrieved when even in such intervals they cannot obtain that reasonable degree of privacy which is at least desirable if it is not quite essential to comfortable refreshment. In cases where meals are supplied upon the business premises there need be no difficulty. The administration resembles more or less closely that pursued in a large family and the need of separate accommodation is felt but little, if at all. Many public restaurants, again, have been wisely organised so as to provide a distinct room or rooms and attendance in the case

of either sex. A further step in the same direction has recently been suggested—namely, the establishment of a thoroughly respectable house of this class for the use of women only. The necessity of maintaining a reduced dining tariff, however, interposes a difficulty, since it is very questionable whether the ordinary custom of such houses would suffice to make them pay. The suggestion is doubtless worth a trial. For our own part, we cannot forget that much has been done, and more may still be done, by utilising present arrangements to attain the end in view. There is no evident reason why in this, as in other departments of public service, the plan of providing under the same management separate accommodation for men and women should not accomplish all that is expected of a system of distinct establishments. It would, moreover, be much less costly and more certain of financial success than the latter method. The solution of this part of the great food problem is in any case an important matter, for certainly no British workman stands in greater need of timely and wholesome nutrition than do many of these lady toilers.

THE LOSS OF THE "BOKHARA."

"LAST seen" and "not heard of again" have now become familiar terms by which we mark in memory the unknown ending of the voyage of many a vessel. Such a phrase, but for the brief record of a very few survivors, has also closed for ever the day's log of more than one strong ship which has left our shores of late but will never again carry freight. The story of the loss of the *Bokhara* has been graphically told by Dr. Lowson. His narrative of almost hopeless conflict and disaster is probably far from unique in the annals of the sea. The like experience has been known by many living seamen. This fact, however, cannot diminish its interest or its instructive reality. Happily we do not in this case hear anything of unseaworthiness or of unskilful management. The unfortunate vessel appears to have been simply overwhelmed by the long-enduring force of a cyclic storm of extraordinary severity. It is well, however, to gather from such a calamity the lessons which it teaches. Not the least of these is that which forbids us ever to despair; and it is, at all events, consoling to register as the one bright spot in all this gloomy history the absence of anything like selfish panic among those who went down with the fated steamer. The composed and manly attitude observed by most of the ship's company and passengers, and not least by the ship's surgeon, in circumstances of the severest trial, is worthy of high commendation.

ACCIDENTAL POISONING WITH STRYCHNINE BY AN UNQUALIFIED ASSISTANT.

THE *South Wales Echo* of Nov. 19th contains the report of an inquest on Mary Ann Mellin, of Mountain Ash, who had come by her death from an overdose of strychnia, given in mistake for ten grains of croton chloral for toothache. A post-mortem examination revealed no disease, and Mr. Morgan, county analyst of Swansea, besides detecting traces of strychnia in other organs, found seven-tenths of a grain in the stomach. The unfortunate mistake was made by Mr. Owen Jones, the unqualified assistant of Mr. E. P. Evans. He had been in this position for about five years, and according to Mr. Evans was generally engaged at a branch surgery. We fear this system is very common in South Wales, and is too much recognised by coroners. Mr. Jones had no explanation to give of the mistake save that he did not glance at the label on the bottle, and that he was very seldom in that surgery. Mr. Evans supplemented this information by stating that Mr. Jones had had a fall from a horse about a fortnight ago and had complained of pains in the head. The coroner summed up, and dwelt particularly upon the question of any negligence amounting to culpability or not, and the jury, after consulting in private, found a verdict as follows: "Death from poisoning by strychnine, dispensed in mistake for croton chloral by Mr. Owen Jones. We find that the manner in which the poison was dispensed was negligent and deserving of censure, but we are of opinion that the negligence did not amount to criminality."

VACCINATION SUSPENDED AT COVENTRY.

COVENTRY has determined to follow the example of other unions as regards vaccination, and the decision is maintained in the face of some imminent risk of small-pox. Dr. Lynes, the public vaccinator for the town district, has addressed a letter to the guardians stating that during the twelve months which have elapsed since they passed a resolution deciding not to enforce the provisions of the Vaccination Acts only twenty-eight children have been presented at his public station, whereas in the twelve months preceding that decision the corresponding number was 577. The newspaper publishing the proceedings of the guardians simply states that no action was taken on the letter. Apparently nothing can now be done but to await the result of the widespread neglect which is being maintained in many parts of the country.

INSANITARY AREAS IN LONDON.

THE improvement of three insanitary areas in St. Pancras, which had been represented by the medical officer of health of the district, Dr. Sykes, has been the subject of correspondence between the London County Council and the St. Pancras Vestry, the latter body not unnaturally desiring the Council to effect the improvements at the cost of London as a whole, while the Council, on the other hand, proposed to undertake this duty in respect of one insanitary area and to leave the other two to the vestry to deal with. Application was made to the Home Secretary for arbitration soon after the representations were made, and an inquiry was opened. It was then found that some doubt existed as to the size of one of the areas, and the inquiry was adjourned with a view to further negotiations between the two bodies interested. The vestry, not being satisfied with the proposals of the Council to which we have just referred, has now asked the Home Secretary to reopen the inquiry. It is stated by a contemporary that the death-rates in these areas last year were 44, 52, and 61 per 1000, as against 20·6 in the parish generally.

POISONS IN THE GARDEN.

A CONTEMPORARY has lately noted the number of poisonous plants and weeds existing in an ordinary garden, and gives the grave warning that "care should be taken that they are not munched or sucked by children." Without a doubt the poisons are there, and will produce bad results if consumed. But happily very many of them are characterised by an unpleasant taste, which diminishes the temptation to tamper with the harmful plant. All the care in the world, however, is probably inadequate when it is a question of dealing with the experimental tendencies of a young child. General warnings of the probable discomforts may to a certain extent check its curiosity, but then these warnings should embrace all plants, and not be confined to sundry special instances, thus leaving the child to infer that, with these exceptions, it is safe to eat the other members of the vegetable kingdom. It would certainly be safer to indicate the few plants which may serve for field feasts than to attempt to impress upon a child the somewhat lengthy list of those to be avoided. In the country, however, and among the children of the poor, all rules and regulations are apt to be set at naught, and it is to be feared that each child learns wisdom, as its elders have done, by bitter experience. The results of one experiment with a sufficiently nauseous plant are usually enough to convince a child of the

unwisdom of personal experimentation and to teach a lesson far more permanent than any ever taught by an anxious parent. Without recommending this mode of instruction, which is not devoid of risk, it is, nevertheless, that by which a respect for the medicinal and toxic effects of plants is most generally acquired.

EXCLUSION OF MEDICAL MEN FROM MONTE CARLO.

OUR contemporaries comment on the exclusion of medical men and their wives from the casino of Monte Carlo. We cannot profess to regret this, and only wish that the authorities would extend their refusal to all other respectable people. It is to the credit of the members of the English profession practising in the principality that they approve of this exclusion. They are right in regarding it rather as a compliment and an advantage to the profession than otherwise—a compliment because it implies that their presence might have a deterrent effect on gambling by patients who are under medical discipline; an advantage as removing them from a place of temptation and excitement where a professional man has no business to risk his hardly earned and modest gains.

BACTERIOLOGY AT KING'S COLLEGE.

IT is now six years since bacteriology has been regularly taught at King's College, and a special report has recently been presented to the council showing the work that has been done in the laboratory during that period. The laboratory was established to provide accommodation for practical instruction and for giving systematic courses of lectures, as well as for granting facilities for original research. Medical men in practice, medical officers of health, analysts, medical and veterinary officers of the services have so readily availed themselves of its advantages that 419 have already made use of it either for instruction or research. A few of these have previously been connected with the College; a great number have been qualified medical men from the United States; others have come from New South Wales, Queensland, Tasmania, China, India, Ceylon, Chili, the Cape of Good Hope and Trinidad; whilst many have been medical officers on leave from foreign service, showing how extensive a demand existed for such a laboratory and such teaching. About forty workers have entered under Professor Crookshank's superintendence during the present winter session, and an evening-class course is in full operation under the direction of the demonstrator, Mr. Hewlett. Numerous researches have been made on actinomycosis, tuberculosis and other diseases attributed to micro-organisms, and a list of these is included in the report.

MATERIA MEDICA IN SCOTLAND.

PROFESSOR FRASER, in his very thoughtful and well-considered introductory lecture which was published in our last issue, drew attention to the anomalies introduced by the changes in the Medical Ordinance which became law on Aug. 5th of this year. These changes were referred to in our columns at the time, but the difficulties are emphasised by Professor Fraser with copious illustrations. Briefly, they refer to the position in the curriculum which the subjects of therapeutics and pathology should occupy. Professor Fraser traverses the well-worn ground of the relations between pharmacology and physiology and between therapeutics and pathology, and he indicates the practical impossibility of giving a satisfactory account of the actions of many drugs without frequent reference to pathological conditions. According to the report of the Scottish Universities Commission candidates shall not be examined in pathology until after they have passed an examination on the therapeutic applications of medicines, hence the teachers of materia medica will, to use Professor Fraser's expressive phrase, find it necessary "to make bricks without straw." Pharmacology and therapeutics to be satisfactorily taught must go hand in hand, but they should equally find their place in the curriculum when from the previous education of the student in physiology and pathology they may be properly appreciated. So far as teaching is concerned this fact has been recognised by the Conjoint Board of the Royal Colleges of Physicians and Surgeons, although, for the purposes of examination, pharmacology and therapeutics are to be divorced, and an attempt at reparation of the evil is made by a new and arbitrary definition of pharmacology. Still the subjects will be taught at the same time, and the outlook is not, therefore, so gloomy as in Scotland, where, although they are linked together, the student is apparently encouraged to attempt the study with wholly inadequate previous knowledge. The new regulations seem so disastrous that it is to be hoped they will shortly undergo revision.

TYPHUS FEVER AT DUNDEE.

THE outbreak of typhus fever at Dundee appears to be still spreading. Twenty-eight cases of that disease are now isolated in hospital. As an index of the insanitary conditions surrounding those attacked, it may be mentioned that a certain family attacked by the disease consisted of eleven persons living in a one-roomed dwelling. The negotiations for a "reception house" have unfortunately fallen through, but it has been arranged that those who have been in contact with the sick shall be kept under strict medical supervision. The School Board has decided that there is at present no need to close certain schools in the town, but exclusion of scholars from infected homes is being rigorously carried out. With these and other sanitary precautions, such as careful and early disinfection of houses and clothes, it is hoped that the epidemic may be held in check.

HYDRO-THERAPEUTICS IN ITALY.

AN ever-growing place in the resources of therapeutics is asserted by mineral waters, especially when taken amid the natural surroundings and under the climatic conditions of the locality whence they spring. Italy is peculiarly rich in such waters, the virtues and uses of which her inhabitants seem to have better appreciated and more effectively recognised in ancient than in modern times. While her clinical medicine has fairly well kept pace with the advance of science and practice, while every appliance for the study of disease and for the cure and comfort of the patient has with tolerable completeness been adopted in her hospitals, she is still far behind her less favoured contemporaries in the development and utilisation of her superabundant mineral waters. She still has the mortification of seeing the tide of invalid travel going past, or even across, her frontiers *en route* to health resorts inferior in most natural conditions to many of her own, the attractions to the former being their undoubtedly better organisation and equipment from a medical point of view and their immeasurable superiority in hotel accommodation, cuisine, attendance and general comfort. This source of revenue, so highly appreciated and effectively utilised by Switzerland, Austria, Hungary, Germany and France, Italy has at last begun to recognise; and, at her wits' end to improve her finances without further recourse to taxation, she is bethinking herself of the mine of wealth placed within her reach if only she will take the trouble to tap it. Of late years, accordingly, there have been held periodical meetings of the profession at or near the great mineral water resorts, with a view to the better organisation of these and the diffusion of their merits over a more extended area, while the Government has come to the aid of the more enterprising of them—Montecatini, for example—

by annual subventions and official superintendence and control. This week the Associazione Medica Italiana d'Idrologia—for such is the central association called—holds its annual sittings in the Palazzo Vecchio in Florence, and a glance at the agenda paper will give some notion of the place hydrology now holds in Italian therapeutics, and, by implication, of the richness of the country in the waters which such treatment calls into play. Dr. G. S. Vinai, for example, will read a paper on the Influence of Hydrotherapeutic Operations on Muscular Fatigue; Professor M. Bossi will discourse on Gynæcology and the Therapeutics of Marine Hydrology; Dr. F. Canova will draw the attention of the meeting to the excellent results he has had from Hydro-therapeutics in Tabes Dorsalis; Dr. E. Morra's special contribution will be on the Alpine Colony for Poor Children at Camandona (Piedmont), in which climatic goes hand in hand with therapeutic treatment; Signor Chiari will take up the theme of Artificial Mineral Waters, and Dr. Vinai will supplement his first paper by two others on the Study of the Cerebral Circulation consequent on the Douche, and the New Bath of Artificial Carbonic Acid as practised in the Hydro-therapeutic Establishment at Andorno (Piedmont). Much that is novel and practical is to be expected from the reading and discussion of these papers, as the names of their authors, well known for previous good work in the same field, will at once signify. They will indicate, we hope, a fresh stage reached in the appreciation, public and professional, of Italy's long-languishing, but now actively resuscitated, interest in her mineral-water resources, possessing, as these do, more than one special advantage, prophylactic as well as therapeutic. At the close of the sittings it was intimated that the Association would hold next year in Rome an International Hydrological Exposition, at which, in separate sections, would be exhibited specimens of all the natural mineral waters of Italy, apart from the artificial waters of the country, which were also to be on view. If, as is likely, this Exposition form part of the larger "Esposizione" under the auspices of the International Medical Congress to be held at the same time and place, it will bring Italy's resources in this branch of therapeutics more fully before the world than they have yet had an opportunity of effecting.

POISONING BY PTOMAINES.

MR. E. WOODGATE, deputy coroner, held an adjourned inquest at Old Brompton touching the death of Lieutenant William Huddlestone, R.E., who died at Chatham Barracks on Oct. 24th. As we mentioned last week the officer died somewhat suddenly after partaking of sardines. Dr. Stevenson of Guy's Hospital, who made an analysis of the remaining contents of the tin and also of the stomach and other organs of the deceased, deposed that in his opinion death was due to an animal alkaloidal poison. His examination showed that the poison was contained in some but not in all of the sardines; for whilst a mouse which was fed on one of the fish soon died, a second fed on another was not harmed. From the vomit a substance was extracted which, when injected, killed a rat. From two sardines he obtained only $\frac{1}{6}$ grain by alkaloidal processes, but this sufficed to kill a rat. The tin which contained the sardines was bright and clean; moreover, it is clear that the symptoms, both in their degree and nature, differed from those of metallic poisoning. Dr. Stevenson could detect no known mineral or vegetable poison. There was, then, suggestive evidence that the death was not due to either of these poisons, and positive evidence that the bodies of some of the sardines contained a substance endowed with lethal properties. The most remarkable fact in the case is that such a small quantity of the poison was quickly destructive to the life of the rat into which it was injected. Dr. Stevenson believed that the decomposition took place before the tinning and that only certain of the fish were affected. Three hypotheses present themselves as possible explanations of the poisonous properties of the fish:—1. The production of a toxic agent by metabolic changes of a vital or physiological nature—a kind of secretion, as it were, by the living fish. This is extremely improbable, for otherwise cases of poisoning would be more common than they are, and before now sardines would have fallen into disrepute and, to a great extent, into disuse. 2. A fermentative process in the dead fish, by means of which an animal alkaloid was evolved from the decomposition. This of course would be of a peculiar nature, and not a mere putrefaction with evolution of stinking gases. It may be here noted that, whilst Dr. Stevenson detected an odour in the tin somewhat different from what is ordinarily present, he admitted that had the sardines been put on his breakfast table he would have partaken of them. The theory in question would seem to us to be the only tenable one, and to exclude the third—viz., that shortly before capture the fish had ingested some poisonous body. The subject of ptomaine poisoning is extremely intricate, and as yet we have but glimpses of the exact number, nature and properties of the toxic bodies. Further research, we trust, will reveal what is now hidden, and so guide us to preventive and curative treatment. We have to acknowledge Dr. Stevenson's courtesy in giving us valuable information.

METROPOLITAN POLICE SURGEONS' ASSOCIATION.

THE fifth annual meeting of the members of this Association, under the presidency of the chief surgeon, Mr. A. O. MacKellar, F.R.C.S., was held on Thursday, Nov. 24th, followed by a dinner at the Criterion, Piccadilly. Between sixty and seventy were present, and as guests were Sir John Bridge, representing the metropolitan police magistrates; Mr. A. C. Bruce, Assistant Commissioner, representing the Commissioners of Police; Dr. Danford Thomas and Mr. Braxton Hicks, representing the coroners of the metropolis; Mr. Holmes, formerly chief surgeon; Canon Boger and many others. At the meeting the annual report was submitted and the Association was shown to be in a satisfactory condition in regard to addition of new members. Many points that had been before the Council during the year, of great importance both in the interests of divisional surgeons and the public, were recapitulated, and the treasurer's report showed the society to be in a sound financial position. The honorary secretaries announced that nearly all the divisional surgeons of the metropolitan police were now members of the Association. The members of council for the ensuing year were elected. Mr. Phillips was elected a vice-president, with the understanding that he would assent to continue the duties he had heretofore filled as treasurer, and Dr. Yarrow and Mr. Spurgin were re-elected honorary secretaries. At the dinner, after the usual loyal toasts, the President, Mr. MacKellar, in alluding to the toast of the evening—viz., "The Association"—happily compared it to a new-born infant who, having gone through all the stages of birth—dentition, vaccination and all attendant ills of childhood—was now fairly launched on its legs as a full-grown child able to take care of itself, and obedient and loyal, moreover, to its parents, its foster parents and its nurse, and giving promise of a vigorous manhood and a useful life. In responding to the toast of "The Commissioners of Police and Assistant Commissioners," Mr. Bruce alluded to the great pleasure it gave him to be present at so representative a meeting of a body of gentlemen so essential to the well-being of the police and the public as the divisional surgeons of the metropolis, than whom he felt assured a more loyal body never existed, and he assured those present that the Commissioner was always pleased to take into consideration any points of importance emanating from them

and was desirous to work hand in hand with them in all matters pertaining to the good of the police service. Sir John Bridge responded for "The Visitors," and gave a humorous illustration of the want of gratitude he found on the part of those coming under his jurisdiction; while, in returning thanks for the toast of "The Coroners," Dr. Danford Thomas said that, without disparagement to the medico-legal acquirements of other medical men, he was always pleased to find a divisional surgeon present as a witness, as he then felt assured he would have good and reliable evidence. Mr. Braxton Hicks also alluded to his sympathy with medical men from his own position as a son of one of the profession. The musical arrangements were under the direction of Mr. Herbert Schartau, who, with his part singers, enlivened the evening with an admirable selection of music, and a most enjoyable evening was spent.

THE TRURO INFECTIOUS HOSPITAL.

THE guardians of the Truro Union are very angry because the Local Government Board refuse to sanction the lease of an old parish workhouse to the city authority, as an infectious hospital, for a term of fourteen years. We believe that during the term in which that building has already been so used part of the premises have been too dilapidated to serve as a hospital, and that the buildings abut on a public thoroughfare. We trust that, however the intending lessors may look at the matter from a financial point of view, the sanitary authority will see that the day has come when isolation, to be effective, must be carried out in a proper building, properly situated and sufficiently attractive to ensure the coöperation of the medical profession and of the public.

DIPHTHERIA AT CARDIFF.

No less than twenty-six cases of diphtheria were notified at Cardiff during the third quarter of the year, of which ten were fatal. This is equivalent to a mortality rate which, though considerably above that of the five previous corresponding quarters, is only slightly above the rate in the thirty-three large towns and much below that of the metropolis.

TRAUMATIC HERNIA OF THE LUNG.

TRAUMATIC HERNIA of the lung is a very rare accident, and experience in its treatment falls to the lot of very few practitioners and is very slowly acquired. Every case, therefore, is worthy of record and careful consideration. Dr. E. Massart of Honfleur has recently recorded an instance of this injury. It occurred in a robust, healthy man, thirty-eight years of age, as the result of a stab-wound in the seventh left intercostal space, a little behind the anterior axillary line. The protruding lung formed a swelling in the wound the size of half a hen's egg; it was smooth, of a rosy colour, irreducible, crepitating under the finger, and not altered in size by the movements of respiration. The wound was fourteen hours old when Dr. Massart saw it, and fragments of dirty cloth were adherent to the wound and the lung. The patient complained of severe pain in the part, and his respiration was short, rapid and embarrassed. An attempt to reduce the hernia having failed, its base was transfixed with a needle carrying a double strand of catgut, with which it was tied in two pieces. The projecting mass was then cut away and the stump reduced into the pleura. The external wound was then closed. Rigid antiseptic treatment was carried out. The result was very satisfactory. The man made an excellent recovery without either pleurisy or pneumonia, and the only complication was slight superficial suppuration in the wound. Dr. Massart justifies his line of treatment on the ground of the great danger of returning an infected lung into the pleura. The case is of great interest as showing the tolerance of the lung of surgical interference, and has a bearing upon the possibility of excising portions of lung for tumour. It is also worthy of note that there was no collapse of lung or pneumothorax after the operation. Those who are accustomed to operate upon the pleura will not be surprised at this, for they have learnt that the general opinion on the danger of opening the pleural cavity is much exaggerated.

FOREIGN UNIVERSITY INTELLIGENCE.

Budapest.—The Professorial Senate of the Medical Faculty has elected Dr. Ludwig Markusovszky an honorary member.

Coimbra.—Dr. Augusto Antonio da Rocha has been appointed Professor of Forensic Medicine and Hygiene.

St. Petersburg (*Military Medico-Chirurgical Academy*).—Dr. N. Sokoloff has been appointed to the chair of Special Pathology and Therapeutics; Dr. Bogoluboff has been recognised as *privat-docent* in Medicine.

Saragossa.—Dr. Luis del Rio y Lara of Cadiz has been appointed to the chair of Histology and Pathological Anatomy.

Vienna.—A new clinic for Hydro-therapeutics has been established under the direction of Professor Winternitz.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Dr. Fernando Augusto de Andrade Pimentel de Mello, Professor of Forensic Medicine, Public Hygiene and Sanitation in the University of Coimbra.—Dr. Johann Belky, Professor of Forensic Medicine in the University of Clausenburg, at the age of forty-one.—Dr. Karl Friedinger, formerly director of the Lower Austrian Lying-in Hospital and Foundling Hospital, at the age of seventy-two.

As will be seen from the report which we publish on another page, the application of the Royal British Nurses' Association for a charter of incorporation was again considered by the Special Committee of the Privy Council on Monday last, when, at the conclusion of the arguments, their lordships reserved judgment. At present, therefore, it is too early to judge of the success of the application, and any comments that we may have to offer upon this latest phase of the long discussion will be more timely later on, when we are in a position to record the judgment at which the Privy Council has arrived.

THE next meeting of the Odontological Society of Great Britain will be held at Leicester-square, on Monday, Dec. 5th, at 8 P.M., when a paper will be read by Dr. Sims Woodhead on "Inflammation in Bone"; and casual communications, by Mr. Ackery, on a case of "Complete Loss of the Teeth from Dental Caries in a lad aged sixteen years," and by Mr. A. W. Barrett, on "Adhesion between Roots of two upper Molar Teeth, and extraction of both simultaneously," will be given.

WE understand that it has been decided that the Sir George Buchanan Presentation Fund shall be devoted to the founding of a gold medal to be given biennially or triennially for distinguished services rendered to sanitary science; that the Royal Society will be requested to award the medal Sir George Buchanan will be asked to define the conditions under which the medal will be given.

ON Tuesday, Nov. 22nd, Dr. W. J. Smyly, Master of the Rotunda, performed the operation of symphyseotomy, the first of the kind, we believe, in the United Kingdom. At the time of going to press mother and child were doing well.

MR. WILLIAM CARMICHAEL MCINTOSH, M.D., F.R.S., Professor of Civil and Natural History in the University of St. Andrews, has been appointed a member of the Fishery Board for Scotland.

WE understand that Dr. T. D. Savill has gone to Warrington at the request of the Royal Commission on Vaccination to investigate the epidemic of small-pox in that town.

HER ROYAL HIGHNESS PRINCESS MARY OF TECK has consented to become "patroness" of the Central London Ophthalmic Hospital, Gray's Inn-road, W.C.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

FRIDAY, NOV. 25TH.

THE Council resumed their sitting, Sir Richard Quain, President, in the chair.

False Death Certificates.

Dr. MAC ALISTER, seconded by Dr. LEECH, moved, "That the solicitor to the Council be requested to communicate to the registrar-generals of the three divisions of the United Kingdom the Council's opinion that it is of the greatest public importance that they should take proceedings under the Registration Acts in all cases in which it comes to their knowledge that a medical practitioner has given a false certificate of death."

Dr. GLOVER asked whether the President or registrar had received, since the last meeting of the Council, any notices from coroners of cases in which false certificates of death have been given by registered practitioners, and if so, how many, and what was the explanation of such notices not being submitted to the consideration of the Council.

Mr. FARRER, solicitor to the Council, replied that there had been three cases since the last meeting in which irregularities were complained of. Two of these cases had been brought to the notice of the Registrar-General. In regard to one of them he had told him (Mr. Farrer) that the irregularities did not amount to a false certificate, and as to the other it was still under his consideration. The third case, it was believed, would be explained by the person accused. But in none of these cases had there been, to the best of his recollection, any complaint by the coroner. He might add here that the Registrar-General had peculiar powers of ascertaining what were false certificates by going to a court of law—powers that the Council were without.

Dr. MAC ALISTER explained that with a conviction under the Registration Acts before them it would be easy for the Council to take proceedings against the practitioner.

The PRESIDENT expressed his approval of the motion, which, he thought, would not be without effect upon the Registrar-General.

The motion was then agreed to.

The Council and the Society of Apothecaries of London.

Dr. BATTY TUKE opened the discussion on the report of the Education Committee with regard to the position of the examination in Arts of the Society of Apothecaries of London. He expressed his regret at the absence of the chairman of the committee, Dr. Leishman, and his hope, which he believed to be well founded, that the Council would find him in his accustomed place at the spring meeting. No one who had studied the minutes of the Council would have failed to notice that from the earliest years of its existence it had taken great interest in the matter of preliminary education. They would find scattered throughout volumes of minutes recommendations all tending to improve the preliminary examinations of medical students. Their attention was drawn to the subject very strongly by their late President. For many years the Council had been liable to pressure from within, but at last it came to pressure from without, for on Nov. 28th, 1890, a communication was forwarded by the Secretary of State for War to the registrar of the Council, intimating that he had had before him a report from the Director-General of the Medical Staff of the manifest deficiency in orthography prevalent amongst the young medical officers of the army, and to inquire whether, under those circumstances, the Council might not insist upon a more efficient preliminary examination of the student before he entered a medical career. This communication was referred to the Education Committee, and one of their recommendations was to the following effect:—"That the examinations enumerated in Group II. of the list of preliminary examinations at present recognised by the Council be omitted from the list, except those conducted by the College of Preceptors, by the Educational Institute of Scotland, by the Scotch Education Department for leaving certificate and by the Intermediate Education Board of Ireland." The examinations referred to under Group II. were that of the Apothecaries' Society of London, examination in Arts; that of the Royal Colleges of Physicians and Surgeons of Edinburgh, preliminary (combined) examination in general education; that of the Faculty of Physicians and Surgeons of Glasgow, preliminary examination in general education; and that of the Royal Colleges of Physicians and Surgeons in Ireland, preliminary examination." The gist of the recommendation was that no professional licensing body should conduct the preliminary examinations. On June 1st, 1891, the Council in committee adopted the following resolution, "That it be recommended to the bodies in Group II. enumerated in the note to Clause 4 of the Education Committee's report to discontinue the holding of their preliminary examinations in Arts." When the question was reopened on May 24th, 1892, the following resolution was come to—namely, "That the case submitted by the Society of Apothecaries of London to counsel, and the opinion given thereon, together with the case submitted by the President to Mr. Muir Mackenzie, and his opinion as printed on pp. 36 to 40 of the minutes of the present session of the Council, be referred to the Education Committee for consideration and report." What he had said explained the circumstances in which the reference was made to the Education Committee. As to the opinions he did not think it was necessary to go into them. The case submitted by the Society to Messrs. Rigby and Leverson was intended to test the validity of a recommendation of the Education Committee to the effect, "That, in the event of any of the examinations in Group II. of the Council's lists of preliminary examinations in general education being continued after Jan. 1st, 1892, they should not be accepted by the Council as valid preliminary examinations, except in relation to the professional examinations of the particular bodies which conduct them; and that they be indicated in the Council's list of recognised examinations." In the judgment of the committee the opinion was sound so far as it bore on the recommendation. Under existing circumstances the Council could not limit the privileges accruing to the student who passed a recognised preliminary examination. Such power of limitation could be exercised only by individual bodies. The committee openly and freely admitted that it was an error to advise the Council to adopt measures which it was not entitled to carry out. Had the statement and opinion stopped short at this point the duty of the Education Committee would have been fulfilled by the above expressions of opinion, but study of the documents made it impossible to refuse two inferences: (1) That the Society of Apothecaries takes its stand on the opinion of counsel, and that it proposes to act on what it is advised are its legal rights in respect of the conducting of a preliminary examination in Arts; and (2) that the Society challenges the power of the Council to insist on the maintenance of the Students' Register. He had some hope that the Council might receive from the representative of the Society some intimation that those inferences were false inferences; but apparently no such intimation could be given. The committee pointed out in their report that should the Society persist in conducting a preliminary examination it would do so in direct opposition to a recommendation of the Council. The Council based the recommendation that the examinations of certain bodies in Group II. should be omitted on the general and often expressed desire that the standard of general education should be raised; on the evidence supplied by public departments that some measure in that direction was urgently called for, and on the admirable spirit which had invariably actuated the various bodies to accept recommendations tending to the general good of the medical profession. Most of the corporations had anticipated the recommendation in question or acceded to it as soon as it was placed before them. The

Society of Apothecaries stood alone in raising legal objections to the adoption of a salutary regulation. He fully admitted that the Royal College of Surgeons of Ireland held it inexpedient to give up their preliminary examination at present, but their document was so mildly worded that there could be no doubt that in a very short time, or as soon as possible, they would relinquish the examination. He awaited with very considerable interest the statement of the representative of the Society of Apothecaries with regard to the reasons for adhering to this examination. For his own part he had not been able to form a theory as to what it was likely to be. The case presented to Messrs. Rigby and Leverson by the Society stated that, "It may be assumed that the standard and quality of the examination held by the Society have not been called in question by the Medical Council." The Council, said the committee in their report, had not called in question the standard and quality of the preliminary examinations of any of the bodies directly; but by its formal recommendations that certain of the bodies should discontinue such examinations, the Council must be held to have reflected inferentially on standard and quality. It was forced on the committee to submit that the following figures supplied ground for criticism as regarded the only body formally resisting the recommendations. They were taken from the table showing results of preliminary examinations for the last five years, and contrasted the results of the examinations of the Apothecaries' Society and those of the College of Preceptors :—

	Apothecaries' Society of London.			College of Preceptors.		
Year.	No. examined.	No. passed.	No. not passed.	No. examined.	No. passed.	No. not passed.
1887	755	588	167	1352	508	844
1888	736	570	166	1339	482	857
1889	652	524	128	1281	464	817
1890	692	471	221	1350	388	962
1891	781	631	150	1452	496	956
	3616	2784	832	6774	2338	4436

These figures showed a percentage of rejections at the Apothecaries' Hall of 23 and at the College of Preceptors of 66·5. If the widest field of comparison were taken and the results of the preliminary examinations conducted by all the bodies in Great Britain and Ireland, as scheduled in the minutes, were analysed, the percentage of rejections in 1890 was found to be upwards of 37 and in 1891 nearly 40. The Committee submitted these figures without comment. The conclusion of the Committee was that the Council should maintain the attitude it had all along assumed as regards the Students' Register. They further deemed it advisable that the Council should, in order to ensure that registration was fully carried out, instruct the registrar and branch registrars for Scotland and Ireland to ascertain whether the names of all applicants for registration in the Medical Register had appeared in the Students' Register, and, in the event of any name not having so appeared, to intimate the fact to the Council, together with the name of the body from which the qualification had been obtained. If in the carrying out of this direction it was shown that the registration of students was systemateically neglectd, the Council would be in a position to consider what further means should be adopted to secure efficient registration. He would now read the recommendations prepared by the committee. They were as follows : (1) That the Council address to the Society of Apothecaries of London a further expression of opinion that the discontinuance of the Society's examination in Arts would be for the public good. (2) That, in the event of the Society of Apothecaries of London not being prepared to intimate to the Council that its examination in Arts is to be discontinued at the end of the present year, the Council attach to that examination in the Council's list a note stating that "the Council has recommended and recommends that this examination be discontinued." (3) That the Council instruct the registrar, and the branch registrars for Scotland and Ireland, to ascertain whether the names of all applicants for registration in the Medical Register have appeared in the Medical Students' Register; and, in the event of any name not having so appeared, to intimate the fact to the Council, together with the name of the body from which the qualification had been obtained. (4) That a copy of these recommendations, with the report of the Education Committee on which they are founded, be sent to each licensing body.

The Council decided to discuss the recommendations separately.

Dr. BATTY TUKE, seconded by Mr. WHEELHOUSE, moved the adoption of the first recommendation.

Mr. MACNAMARA referred to the state of things in Ireland in regard to preliminary examinations.

The PRESIDENT reminded him that the recommendations before the Council only dealt with the Apothecaries' Society of London.

Mr. MACNAMARA : I thought it only right that Mr. Carter should know that he is not the only black sheep, and the reason why.

Mr. BRUDENELL CARTER said it would perhaps be right that he should endeavour to bleach himself as soon as might be. He rose under circumstances of peculiar difficulty, because in the first place the report of the committee did not come into his hands until yesterday morning, and the interval which had elapsed had not been sufficient to allow him to have any communication with the authorities of the Society of Apothecaries or to ascertain what their feelings might be upon the subject matter of the report. The observations he proposed to make must not, therefore, be taken as those of the Society, but simply as the expression of his own personal opinion. The second difficulty under which he laboured was that, being a member at once of this Council and of the Society of Apothecaries, jealous of the honour and careful of the interests of both, he should greatly deplore if any injudicious word of his were to do anything that might promote or otherwise than retard or prevent the possibility of a collision between two bodies, both of which he held in the highest and most unfailing respect. But those difficulties were diminished as far as his own perception of them went by the circumstance that he had never before engaged in any dispute in which the merits of the question were so absolutely and entirely upon one side and the demerits upon the other. In his humble opinion, in this controversy justice, legality and expediency were alike mustered on the side of the contention of the Society of Apothecaries, and on the side of the Education Committee nothing. He could hardly understand what the Education Committee had to do with this particular matter. He could hardly understand how they contrived to escape from the scope and limits of their proper duties, and to get into this particular galley, in which they were found pulling so hard an oar. The result of the reference to the Education Committee was the brilliant suggestion that the orthography of young medical men would be improved if the preliminary examinations in Arts were conducted no longer by the medical corporations but by the College of Preceptors, a remedy which certainly was not infallible, because in the present session, among four gentlemen who had been reported to the Council as having failed in orthography, one had been passed by the College of Preceptors. It seemed to him a monstrous proposition that a body which was fit to be entrusted with the control and direction of the qualifying examinations for entrance into the medical profession was not fit to be entrusted with the control and direction of preliminary examinations. If that suggestion came to the Council from any external source he was sure they would unite in repudiating it in the most vigorous possible manner. Upon a former occasion Dr. Heron Watson quoted some previous resolution of the Council to the effect that such a change would be likely to be beneficial. Such a resolution did not modify his opinion. He had abandoned the practice of ancestor worship, and the mere fact that at some remote period a majority of this Council or of a former Council, he knew not how constituted or in what circumstances, passed a resolution which appeared to him to be extremely foolish did not in the least modify the opinion which he held upon the present question. He could not see that the Society of Apothecaries would be justified in waiving their examination even on the plea that it might be conducted by a wholly undistinguished body like the College of Preceptors. When this resolution was passed originally by the Council there were two classes of corporations to whom it might be said to have referred. There were those who had a number of candidates, which was not sufficient to make the examination a matter of the smallest importance to them, and there were those who had a considerable number of candidates and to whom the examination might be of importance. The former class were quite ready to relinquish a troublesome and unprofitable task. Some of them even anticipated the recommendation of the Council and had beforehand ceased to do what they did not care to continue doing. But the Society of Apothecaries stood in a

totally different position. Its examination in Arts had been conducted upon its present lines for more than thirty years. It was resorted to annually by increasing numbers of students, both within and without the ranks of those who intended to join the medical profession, and it was a source of definite remuneration to the Society. In those circumstances the rulers of the Society were not free to act precisely according to their own inclinations. They occupied a fiduciary position. They were bound in honour and duty to protect the privileges of the Society, and to hand down intact to those who came after them all the rights which they had received from their predecessors. With regard to the fitness of the Society to direct and control such an examination as this, it was perhaps sufficient for him to say that among its rulers was Professor Henry Morley, and he thought if they were to place Professor Henry Morley in one scale and the College of Preceptors, Fellows, Members, Licentiates, and the whole of the examining apparatus in the other, the College of Preceptors would kick the beam. In this condition of things the Society determined to ascertain their rights, and for that purpose took counsel's opinion. As to the inferences drawn by the committee, they appeared to him to be absolutely unfounded. The Society had expressed no intention of any kind. It had raised no legal objections, it had merely inquired whether it was possible to raise them. Then the committee spoke about inferential reflection. Surely it was the business of the Council not to endorse inferential reflection. A door must be open or shut. An examination must be sufficient or insufficient. If it was insufficient it was the duty of the Council to make proper representations to the body conducting it, and if those representations failed in their purpose to approach the Privy Council. The figures that were referred to in the report were absolutely worthless. They all knew that a high rate of rejections in an examination was no test whatever of its value. Then they came to the last recommendation, of which he could only say that it positively bristled with libellous suggestions and defamatory innuendoes. He could not tell what course the Society might be disposed to take. He knew quite well what course he should be prepared to take if he were one of their rulers, and he felt sure that without legal advice the Council would act most unwisely if they in any way endorsed the sentences which they had before them. He begged to move, "That Section A (the portion relating to the Society of Apothecaries) of the report and recommendations of the Education Committee be referred to the Examination Committee for consideration, with an instruction to confer with the legal advisers of the Council before sending in their report."

Mr. COLLINS formally seconded this amendment.

Dr. MACALISTER protested very strongly against the amendment. The whole subject of preliminary education had been carried through all its steps by the Education Committee, and to refer this matter to another committee could only result in the resignation of the Education Committee. The object of the Council in this connexion was to raise the standard of preliminary education. Although they got a new stimulus from the strong letter of the Secretary of State for War, that was by no means the beginning of the affair—that only showed they wanted hurrying up. When they had a list of seventy or eighty examinations, all supposed to qualify students for entrance into the profession, and when they were told that these examinations did not keep out the unqualified, the only possible course that could present itself to any committee charged to look into the matter was to arrange them into a comparative order of difficulty or searchingness, and to cut off those at the bottom of the list. The Education Committee had proceeded upon that plan. He said deliberately that of all the examinations that students passed in England, that of the Society of Apothecaries was the one which offered the least and the weakest guarantee of efficiency in the matter of preliminary education. It was notorious that this was the easiest examination, and that students who were plucked again and again in other examinations came up to the Society of Apothecaries and returned with registration certificates, which of course defeated the object of those who wished to see them attain the highest standard of education.

Dr. ATTHILL said he was in a difficulty, for while he held strongly that the medical corporations would be far better if they were free from the charge of these examinations, he was not able to say that on behalf of those who sent him to the Council. He felt very unwilling to vote for the amendment, because he was told it would be looked upon as a censure upon the committee.

Mr. BRUDENELL CARTER said he had not the slightest intention of throwing a slur upon the Education Committee. He merely thought the Examination Committee was the proper committee to deal with the question of examinations. He would be happy to make the reference to the Education Committee.

Sir JOHN SIMON thought Mr. Brudenell Carter had pushed the necessity for legal advice too far. In point of fact, the policy advocated by the Education Committee had been before the Council time after time. The original intention was that men entering the profession should have the school education of gentlemen, and when the Council took up the matter they at once said the way to ensure that was that the people who looked after the general education of the country should certify the students. The bodies generally had accepted the view that the Council did not want a special examination adapted to medical students, but the general standard of good school education in the country, and had retired from the position of being special examiners. It was only local considerations that prevented the bodies in Ireland from adopting this course in the meantime. He had often stood on the side of the Society of Apothecaries, but on this occasion he thought they were wrong. They would be wrong if the examination related only to their own licentiates, but he confessed for himself that if that were all, he should not be very strict in watching whether they complied with the rules of the Council. When, however, it came to the Society pretending to meet the world at large and to be an examining body in Arts, they must surely draw the line, and he saw no alternative but to support in substance the view taken by the Education Committee.

The PRESIDENT said that if the recommendations of the committee were carried, there was no doubt they would lead to another lawsuit that would be as long and expensive as that in which the Council were already engaged. He was sure of this, that the Society of Apothecaries would not give up their privileges unless they were compelled. In these circumstances he would be glad indeed if counsel's opinion were obtained before the vote was taken.

Dr. HAUGHTON thought Mr. Brudenell Carter had thrown away his case by attacking a body about which he knew nothing—namely, the College of Preceptors. This body was as much respected among schoolmasters as the Council was among medical men.

Sir DYCE DUCKWORTH said he could not agree with the President. They were not there to be frightened by the terrors of the law or by lawyers. They were there to do their duty.

Mr. BRUDENELL CARTER again disclaimed having any authority in this matter to speak for the examination of apothecaries.

On a vote being taken the amendment was lost.

Sir W. TURNER suggested that the recommendation in its present form was too wide. All the Council had to do with was the examination of the Society so far as it appertained to the entrance examination to the medical profession.

Dr. MAC ALISTER explained that the title given to the examination by the Society was the "Preliminary Examination in Arts for medical students."

It was agreed to incorporate this title in the recommendation, which, thus amended, was put to the Council and adopted.

Dr. BATTY TUKE then moved the second recommendation of the committee.

Sir W. TURNER thought the Council should wait to see the result of the first recommendation before going further. They should not put themselves into a violently antagonistic position with regard to the Society of Apothecaries. He hoped when the Society received the additional suggestion from the Council relative to the discontinuance of this examination that they would carefully consider it while reserving their legal position. There were times when important public bodies had got other things to consider than mere legal position. There was, as it were, a certain general sentiment that had to be taken into consideration by all public bodies, and there could be no doubt that the general sentiment of this Council was that those preliminary examinations in Arts should be conducted by bodies whose business it was to conduct examinations in Arts. He felt strongly that they ought not to take up a militant attitude to he Society. Let them go to the Society as friends, giving them friendly advice and suggestion, not brandishing a tomahawk.

Dr. BATTY TUKE could not agree with Sir William Turner.

It was not the Council but the Society of Apothecaries who was brandishing the tomahawk.

Sir W. FOSTER said he would vote against the motion in the hope of getting something stronger and better done at another meeting of the Council.

Dr. MCVAIL expressed the view that it would be time enough to settle this matter when they knew what the Society had determined to do.

Dr. HERON WATSON said the recommendation was nothing but a covert threat, and urged the Education Committee to withdraw it—meantime at all events.

Sir JOHN SIMON said there was nothing to prevent the Council omitting the name of the Apothecaries' Society from the list of bodies they recognised. He was not at this moment prepared to recommend that course. It was their last resort. They could not go on recommending for ever.

Sir W. TURNER moved, "That the Council defer the consideration of Recommendations 2, 3 and 4 until the May meeting, so as to give time to the Society of Apothecaries to reply to Recommendation 1."

Dr. LEECH seconded this amendment.

Mr. BRUDENELL CARTER said he had no doubt that in May next he should be able to speak here with the authority of the Society. As to the proposed omission from the list of examinations, his own feeling would very strongly be that the only way in which it would be open to the Council to do that would be in the way prescribed by the Medical Act—namely, by representing to the Privy Council that the examination was inadequate.

The amendment of Sir William Turner, applied only to recommendation No. 2, was put to the Council and agreed to.

Dr. BATTY TUKE then moved the third recommendation of the Education Committee. The committee, he said, were anxious to ascertain how far this registration was obligatory or not. As a preliminary measure they wanted to see whether registration was carried out by the bodies as a whole, and, having obtained information, they should be able to act.

Dr. BRUCE seconded the motion.

Dr. MAC ALISTER said that at Cambridge, although every student, he believed, was registered, the University did not require registration as a preliminary to admission to the professional examination. A larger number of students were, he believed, registered from Cambridge than any other school in England; but there was no duty laid on their registrar to see that they were registered. It seemed to him to be an office matter, and not one for the bodies, in the first instance, merely to see that the time which had elapsed from the appearance of the student on the Students' Register to the time of the diploma should be five years at least.

Sir W. TURNER said the argument of Dr. Mac Alister seemed to him rather to point to this—that the University of Cambridge wished to impose upon the registrars of the Medical Council duties which it should discharge itself. He would suggest to the University of Cambridge a very simple mode of discharging its duty—namely, that it should not admit to the professional examination any student who was not on the register. That was carried out in the University of Edinburgh; no student was allowed to appear for the professional examination unless he produced his registration certificate which he had got from the registrar in London or Dublin, or in Edinburgh. It seemed to him that the duty of seeing that students had been on the Register during the period that the Medical Council required was a duty primarily to be discharged by the medical authorities. He thought that was the proper way to look at it. He confessed that when he read the recommendation the thought occurred to him, how many additional clerks would be required in the registrar's office? Because, if they were to inquire into the diploma which was presented for registration at this office in London or the equivalent offices elsewhere, there must be a considerable amount of time spent in going through all the volumes of the Students' Register, to which Professor Mac Alister referred. There were many students who went on the Register before the five years, and that search would not require to be made if the medical authorities themselves demanded the production of the medical students' registration certificate before they admitted them to the professional examination.

Dr. BATTY TUKE stated that it would be found in the records that it was distinctly intimated by the Medical Council to the licensing bodies that the Council had no authority over these bodies as to the registration of students.

Sir W. TURNER said the licensing bodies should see that the student had been on the Register a certain length of time.

Mr. MACNAMARA said that with them in Dublin the first thing was to see that the student had paid his fee, the next was the registration certificate, and then they went through all the other certificates which might be required to entitle him to present himself for examination. The duty was discharged entirely by a committee of the joint boards.

The recommendation was adopted by 16 votes to 9, and the fourth recommendation was withdrawn.

Reports by Committees.

On the motion of Dr. BRUCE, seconded by Mr. BRUDENELL CARTER, it was decided without discussion that "each committee shall once a year, at least, make a report on the subject referred to them by the Council."

Application for Registration.

The next business was the consideration of the application for registration in the Medical Register, referred to the General Council by direction of the English Branch Council, from Mr. Freeland John Freeland, L.S.A. Lond. 1884, M.R.C.S. Eng. 1885, L.R.C.P. Lond. 1886, who has resided in Antigua ince obtaining his qualifications.

The REGISTRAR stated that the English Branch Council, whose function it was to do so, had investigated the statements made by Mr. Freeland and had found them to be correct, and now recommended the General Council to direct the registration of Mr. Freeland.

The recommendation was agreed to.

Fee for Antedating.

Sir DYCE DUCKWORTH moved the following recommendation of the Students' Registration Committee, "That with regard to all future applications that may be made for the antedating of the commencement of professional study by medical or dental students, no such application should be granted except subject to the condition of the payment of a fee of half a crown to the Branch Council through which the application may be received." There was, he stated, very little to be said on this point. Antedating gave rise to a good deal of trouble, especially in the office, and it was thought the payment of a small fee would prove useful in several ways. In the first place, when it became known that there was a small fee attached to it, it would make people a little more punctilious and careful. The amount of correspondence and work required in the office was so much more in these cases than others that it was thought desirable to charge a very small fee in each case. That commended itself to all the members of the committee and he thought the Council would see the force of it.

Dr. BRUCE seconded the motion.

Sir W. TURNER: That is a sort of fine, if I understand it.

The PRESIDENT: Yes.

The recommendation was agreed to.

Dr. MOORE moved the following recommendation from the same committee on the same subject, "That, with a view to terminate the undesirable practice of antedating, the attention of the authorities of all the medical schools in the United Kingdom be called to the extreme importance of not allowing students to commence a professional course of study before they have passed their preliminary examination—the subjects of which, according to the regulations of the Council, must be all taken at one and the same time—and of seeing that their registration is then immediately effected." If the registration of students was desirable, he observed, it was quite clear that it should be carried out as systematically as possible.

Sir DYCE DUCKWORTH seconded the motion, which was agreed to.

This concluded the business of the session and the Council then rose.

THE NEW EYE HOSPITAL, SOUTHWARK.—This institution, which is to be opened on the 15th inst. by the Duke of York, marks a special feature in hospital construction. It is, probably, the only hospital in the kingdom which is absolutely fire proof. The floors are made of iron and concrete, and the whole of the fittings are of teakwood, which is said to be non-inflammable. Ample provision is made in the event of an outbreak of fire. The building is entirely warmed by hot water and lighted by electricity. There is not in the building a single angle or projecting ledge which could harbour dust or injure a blind or semi-blind patient.

REPORT ON THE SANITARY MEASURES IN INDIA IN 1890-91.

THIS report, which has just been published, is one which is compiled for presentation to both Houses of Parliament, and it deals with the vital statistics and medical history of India as a whole and with the causes and progress of epidemic and other important kinds of sickness that have prevailed during the year, together with the sanitary measures that have been introduced. It is, in reality, a condensation of all the annual reports furnished by the sanitary and medical officials to the Indian Government, to which is added, as an appendix, the various memoranda drawn up by the Army Sanitary Commission in this country for the information of the India Office. The whole forms a Blue-book of 226 pages of the most analytical and condensed kind of composition, and forms an excellent sample of what is termed in official life "précis writing," which, it need scarcely be said, is not a form of light literature. These reports, nevertheless, contain a large amount of varied information, some of which is of an original, and much of it of an interesting and instructive character.

We considered some months ago the report of the Sanitary Commissioner with the Government of India, and especially those portions of it which dealt with the European army in that country, consequently there is no need to dwell upon that subject now. We may remark, however, that the loss to the whole army by invaliding in 1889 was equal to 25·29 per 1000, and that the proportion of invalids to strength was least in Madras and highest in Bombay. Of the total number invalided 35 per cent. were discharged as unfit for further service. In the European army as a whole 78 per cent. of the total strength had seen less than five years' service. As regards the native army the mortality from pneumonia was more than four times as great as that of the European soldiers. On the other hand, the death-rate from enteric fever was only 0·7 per 1000 among the native troops, as compared with 4·91 among European troops and 0·09 among prisoners in gaols. Dr. Gregg, the sanitary commissioner for Bengal, speaking of the great prevalence of malarious fevers among the native population, remarks that the more personal knowledge he gains of Bengal the more does he feel convinced that the want of free drainage is one of the principal causes of the excessive unhealthiness of the province. Most people would be disposed to concur with him in this opinion. Theoretically it is easy enough to indicate the remedy, but its application practically would be a very difficult matter owing to the enormous expense that would be involved by the introduction of any adequate system of drainage.

Turning to the appendix, which contains the memoranda furnished by the Army Sanitary Commission, we come to some comments and remarks which are of more than ordinary interest at the present time, when the presence of cholera in Europe is exciting so much attention. That disease was but little prevalent among the troops in India in 1890. Of the 58 cases of European soldiers treated, these were spread over eighteen stations and over nine months of the year. Except at Lucknow, where there were 18 cases, the attacks at any one place were few and in many instances confined to one or two cases. The same remarks apply to the history of the disease among the native troops. The localisation of cholera is well illustrated by the proportion of buildings attacked out of the total number occupied. For British troops this proportion was 15 per cent., for native troops 3·18 per cent. and for gaols 24·6 per cent. The results of moving into camp continued to be very satisfactory. The effect of season on the prevalence of the disease, and the synchronous rise and fall in the number of attacks and fatality, as if in obedience to some general influence operating in common, in outbreaks at different places, often widely separated from one another, were also well-marked phenomena.

The Army Sanitary Commission makes some important remarks of a practical kind as the result of their critical analyses of different reports, and to some of these we may now advert. As regards the striking difference between a non-epidemic and an epidemic year, let us take by way of illustration an interesting and graphic diagram of the monthly rise and fall of cholera in the Punjab during each of the twenty-four years from 1867 to 1890. In 1886 only 12 deaths were registered throughout the whole province. In 1867 the number was 43,146. No figures could enforce more clearly the contrast between a year when cholera was practically almost absent and one in which it was epidemic. Similar though not such marked, contrasts may be observed between other years. It is commonly most severe in the province in the months of July, August and September; but, as so often happens, its prevalence in these later months of the year is heralded by isolated attacks much earlier—in April, for example.

As regards the relation of cholera to railways, the Sanitary Commissioner for the Punjab states that many railways have now been opened in the province, affording rapid means of communication between distant places, and the disease is doubtless rapidly distributed by that means. The Army Sanitary Commission, on the other hand, oppose this view, because they do not consider it to be borne out by the facts. They say that they have examined the report "in order, if possible, to find any facts tending to show that the epidemic of 1890 in the Punjab was affected by the railways, but we can discover no facts of this kind. On the contrary, the whole history of the epidemic would seem to prove that the railways had no influence whatever in this respect. In order to see this clearly, it is only necessary to look at the cholera map. Beginning with the south-east, we have cholera beginning in the Delhi district on April 25th. The next important place on the line going north-west is Umballa, and here it did not appear till June 2nd. Next Ludhiana, June 21st, or south to Goorgaon on May 12th. All these places are within not many hours' distance by rail from one another. Many other examples might be cited; but we need only add, generally, that there is no instance of rapid spread such as requires the introduction of the railways to explain. In connexion with the railways, indeed, the most remarkable fact is the exemption of large areas through which trains from affected districts were daily coming. This is to be seen in the large tracts traversed by the line from Lahore to Peshawar in the north-west and from Lahore to Mooltan in the south-west. Both these tracts of country suffered very slightly; in many of the districts comprised in them there was no cholera at all. On the other hand, districts removed from railways suffered to a considerable extent. If it could be shown that the railways are the great disseminators of disease they would certainly be far from an unmixed blessing to the people; but there is no evidence of the kind. The problem to be solved is, whether the improved means of communication have rendered epidemics of cholera in India more rapid and widespread than they used to be, and the facts, so far as we are acquainted with them, entirely negative any such supposition."

As regards the question of importation and land quarantine, the Army Sanitary Commission say in another place that unless the whole commerce and social life of a province is to be brought to a standstill, it is not possible to control the movement of the people from one village to another or from one district to another. Any attempt of the kind would involve an army of police with an enormous expenditure; it would be regarded by the people as a grievous interference of an oppressive nature with their trade, occupations and social intercourse. Whatever scientific interest may attach to the theory of importation as the cause of cholera, this question, especially in a country like India, is, in the opinion of the Army Sanitary Commission, altogether outside the pale of practical sanitary action. They hold apparently that the only reliable means of dealing with cholera and other diseases is to improve the sanitary conditions under which people live, one of the most important of which is the water-supply, for there is no safety, they remark, against virulent epidemics where there is an unprotected water-supply. As to the liability of pilgrims to be attacked by cholera, this is a well-known fact that has been frequently insisted upon, but the evidence regarding the dissemination of the disease by them is still considered very imperfect; and the Army Sanitary Commission lay down different points that require to be carefully investigated and set forth before such evidence can be deemed of a sufficiently complete and satisfactory character. They urge that in India, and more especially in Bengal proper, where hundreds of cases of cholera are constantly occurring over a vast area, it is impossible to prevent persons—be they pilgrims or not—passing from one village in which there are one or more cases of cholera to another which is free from the disease. The only practical measures for the prevention of cholera are sanitary improvements—improvements in drainage, water-supply, dwellings and the other requisites of health.

CHOLERA.

CURRENT NOTES, COMMENTS AND CRITICISM.

THE appearance of cold weather on the Continent—for in this country it has been remarkably mild up to the present time—has had a markedly repressing effect on the epidemic, which may be said to have almost disappeared, although it still lingers in various places. Last week sixteen deaths occurred from cholera in Holland, and since then three fatal cases are reported from Gastel, in North Brabant, and one fatal case at Weesp, in North Holland. At Budapest the fresh cases now average two or three, with one death, daily. There have been several fresh cases of cholera, with two or three deaths at Dunkirk and in the surrounding villages. The *Débats* publishes a telegram from Cherbourg of Nov. 29th announcing the presence of the disease at that place and some of the neighbouring villages, and of two fatal cases at Gonneville.

Professors von Pettenkofer and Emmerich's experiments have of course afforded materials for comment and discussion. In the case of Professor Emmerich it is understood that after his experiment of swallowing the comma bacilli he purposely indulged in some errors of diet—that is to say, he partook of a variety of things at supper which were calculated to disagree with most people. It is perhaps noteworthy that some diarrhœa followed the experimental swallowing of the bacilli in both cases, and still more noteworthy that bacteriological examination of the dejecta showed that a very large increase in the number of these bacilli had taken place. But the negative phenomena that followed the experiments, although they have a certain value, do not of course prove that because cholera did not result in these experimenters it would not do so in other and more susceptible persons. All estimates, however, which have been put forward as to the number of persons who may be regarded as cholera proof are purely conjectural and of no scientific value. Outside Germany the doctrine that the comma bacillus is *the* cause of cholera is not by any means universally received. Its presence is still regarded by many authorities as a concomitant feature in the morbid process and the index of a condition brought about by physico-chemical changes in the tissues rather than as the cause of that condition. We do not yet know sufficient about the life history of the comma bacillus, its morphological varieties and their pathogenic and other relations to one another, the exact time at which these micro-organisms manifest themselves in cholera, and the part which diseased tissues and fluids play in providing the necessary soil and nidus for their development and breeding, or the nature of the changes which these vitalised agents bring about and the virus which their presence is assumed to produce, to warrant us in dogmatising, as if our knowledge were of an assured and demonstrable kind. We are still sadly in need of more light being thrown on these and other matters before we can turn them to any practical account, and we must await the publication of the observations which have been made by various continental observers during the present epidemic before we are in a position to say what advances have been made in our knowledge of the etiology and pathology of cholera.

THE CHOLERA IN FRANCE.

(FROM OUR SPECIAL CORRESPONDENT.)

A VISIT TO TROUVILLE.

Tardy and Exaggerated Precautions.—Effects of Fear.—Coercive Measures against Well Water.—Houses without Drains.—Rival Drainage Schemes.

TROUVILLE is probably the most fashionable watering-place in the north of France. It has been regarded as the summer boulevard of Paris and is certainly the rendezvous of the gayest, the most fashionable and extravagant sections of Parisian society, yet Trouville is but a very small town, possessing barely 7000 regular inhabitants. It is situated at the mouth of a small river called the Tonques and not long ago was little better than a mere fishing village. There is, however, an unequalled beach of soft sand, and gentle slopes facing the sea offer excellent sites for the erection of villas and mansions. Here beautiful dwellings have been constructed, together with a luxurious casino. To the north-west of the beach is the Engish Channel, and to the north-east, across the broad estuary of the Seine, can be seen the town of Havre. Steamers ply backwards and forwards from Havre two and three times a day and the inhabitants of Havre often come over to Trouville for a sea bath and a few hours' recreation. Though these casual visitors add to the wealth and gaiety of the town in normal seasons, they were far from welcome when the cholera was raging at Havre. When the Trouville and Deauville races are run as many, it is said, as 10,000 persons have been brought over by the Havre boats in one day. The greater part return to Havre the same evening.

On Aug. 13th, 14th and 15th last a great international concourse of firemen gathered at Havre. Dr. Gibert, as medical officer for epidemics, protested and urged that this fête should be postponed, for there had been deaths from cholera at Havre ever since July 15th. This advice was not followed, and among other visitors the Fire Brigade of Trouville went over to Havre. On their return eight of the company were seized with violent diarrhœa and cramps. Fortunately all the firemen recovered and as cholera was not yet suspected no particular precautions were taken. It would be interesting to know whether any of the English firemen who went over in considerable numbers to Havre for these fêtes suffered in a like manner on their return to England. Also, it is most important to investigate the character of the violent diarrhœa often contracted by persons who are in towns where cholera prevails. Is such diarrhœa a sort of abortive cholera capable of producing true cholera by contagion among other more susceptible subjects? If so, some of these firemen who simultaneously fell ill after spending a few days at Havre may have brought the germs of cholera to Trouville. But others were ill besides the firemen, and so far back as the previous month of April some of the numerous visitors coming from Paris might have brought cholera to Trouville. I have already related that at Havre the first case of cholera occurred on July 5th and the patient was a woman who had just arrived from Paris. As Trouville is essentially a Parisian resort, a very large proportion of its summer visitors came from the infected capital. For several weeks after cholera had broken out at Havre visitors in thousands came over to Trouville from that town, while the Trouville Fire Brigade and many others went over to Havre. As a result there were not only suspicious cases of illness, but four deaths from cholera at Trouville; and close by, on the other side of the narrow river at Deauville, seven deaths from the same cause. In a word, Trouville was exposed to cholera infection without let or hindrance for four clear months. Will it be credited that, after having passed through this danger scathless, it then occurred to the authorities that it was necessary to take precautions? This inconsistency may, however, be explained on financial grounds. Towards the end of August there were some 4000 visitors still remaining at Havre. This represented receipts for the trade of the town of about £2000 per day. By this time the prevalence of cholera at Havre had become notorious. People believed more readily in the Havre cholera than they did in the Parisian cholera. No one suggested that intercourse with Paris should be stopped, even though Paris had infected Havre, but the visitors at Trouville threatened to go away if the steamships plying between Havre and Trouville were not immediately stopped. Under these circumstances the municipality gave orders that no vessel from Havre should be admitted into the port of Trouville. Of course the goods usually sent from Havre reached Trouville just the same, though, as they were sent by rail, they came by a circuitous route. So also with regard to passengers; only there was this important difference, that passengers landing from the boat obviously came from Havre and could, in consequence, be watched. On the other hand, travellers by train need not book through, and there was nothing to prove they came from Havre any more than from any other part of the country. In spite of these facts the steamboat traffic was interrupted for ten days, nor would it have been re-established at the end of this time but for the active intervention of the Minister of the Interior. When the communications were thus re-established extraordinary precautions were imposed. To pacify the alarm of the inhabitants a disinfecting stove was sent to Trouville by the Minister of the Interior. This feeling of alarm was

graphically illustrated by the experience of one of the local chemists. Before the steamboat service with Havre was suppressed he sold about fifteen preparations of bismuth per day, but as soon as the boats ceased running he only sold two or three such anti-diarrhœa mixtures in the course of a day. An amusing anecdote is told of the chemist at the neighbouring small bathing station of Villerville. The season was at its height, everyone in excellent health, when, on a certain day, the walls of the little town were covered by official posters bearing the signature of the prefect of the department, and describing what precautions and sanitary measures should be adopted to prevent the advent of cholera. On the very next day the local chemist had to make up forty-five prescriptions for colic. Yet, as none of these cases developed into cholera, it is clear that they were simply the result of the alarm caused by the official poster. So to pacify such fears minute precautions were taken when the steamboat service was re-established. Every passenger had to submit his luggage to very careful examination. All soiled linen was seized and disinfected in the stove lent by the Minister of the Interior. Then all persons who came from Havre were watched for five days. The hotel keepers were supplied with disinfectants and elaborate explanations were given, so that they might know what to do while waiting for the arrival of the doctor. When cases of diarrhœa occurred everything that was at all likely to be soiled was at once burnt. It is thought that these precautions saved the town of Trouville; but as they were taken so late it seems to me more likely that the town was not in a condition favourable to the spread of cholera. This does not, however, imply that Trouville can boast of good sanitation. No such assertion can be made, though certainly the death-rate is not so high as that of Caen. The deaths from 1882 to 1891 were annually 143, 155, 138, 155, 175, 151, 153, 175, 159. 172. This gives an annual average for the ten years of 157·6 deaths. The population of Trouville is now estimated at 6700; the previous census gave the number as 6308; so that the average may be taken as 6500 for the ten years, or a death-rate slightly exceeding 24 per 1000 per annum. But considering that there are sometimes as many as 30,000 visitors at Trouville, in the statistics of the town budget the average population is put down at 10,000. This figure is reached by the calculation that if twelve different visitors each remain one month at Trouville, this counts as one person for one year. If such a system of counting is to be admitted, then the death-rate would only be equal to 15·7 per 1000, and certainly the death-rate of so luxurious and wealthy a place as Trouville ought not to exceed the latter figure. But however these statistics may be twisted about, there is good reason to believe that the death-rate could be considerably reduced, and this simply because the sanitary condition of the town is far from satisfactory.

Fortunately the municipal authorities at Trouville are thoroughly awake to the importance of good sanitation. They have already submitted to the Government a general scheme of drainage and, pending its realisation, have adopted some useful measures. It must also at once be stated that Trouville has a water-supply, not of its own, but farmed out to a private company. The water comes from a distance of seven and a half miles, and is brought to the town in conduits that are made partly of iron and partly of cement; these works were terminated in 1878, but I believe some portions of the canal require repair. The water is stated to be pure but hard, and is sold by the company to the inhabitants of the town at the rate of 5*d.* per cubic metre in winter and 10*d.* in summer. Formerly there were wells, and when a purer supply of water was brought to the town many people still continued drinking the well water. But some time ago a celebrated actress died of typhoid fever which, it was said, she had contracted at Trouville. This supplied the pretext for a violent campaign, started in several newspapers, against Trouville. These denunciations have done a great deal of good, and have achieved more for the education of the people and authorities at Trouville in sanitary matters than any number of learned lectures or scientific demonstrations. First and foremost the mayor caused all public fountains which derived their water from wells to be closed. Then he convoked all the hotel- and lodging-house keepers and explained to them how disastrous it would be for the town if another case of typhoid fever occurred among the visitors. To avoid such a calamity they must cease drinking water from private wells and subscribe to the water company's supply. On the proprietors of cafés the authorities were able to bring to bear more direct pressure. Those who refused to subscribe to the town water-supply were specially watched by the police and, at the very first and most trivial infraction of the licensing laws, were at once prosecuted. They soon found it paid better to subscribe to the town water-supply. This shows how defective are the sanitary laws of France. There should be no necessity to resort to indirect coercion to prevent the use of sewage-contaminated well water in cafés. It is true that fifteen years ago a municipal decree was issued declaring that all cesspools in Trouville should be rendered watertight. The water of the neighbouring wells ought not, therefore, to be contaminated; but we all know how illusory are such decrees.

In a project for the drainage of Trouville, presented by the mayor, M. Durand-Conyère, and adopted by the Municipal Council on April 4th of this year, it is stated that there are 150 houses in the town with watertight cesspools and 650 houses with cesspools that are not watertight. Further, there are 650 houses which have *tinettes* or pails and no less than 320 houses that have no closets whatsoever. Where the cesspool is really watertight the inhabitants use as little water as possible, so that they may avoid the expense of frequently emptying the cesspool and ensure a high percentage of fertilising ingredients in its contents. Under these circumstances it cannot be expected that soil pipes should be trapped, for that requires too much water. It is estimated that the emptying of cesspools costs 8*s.* per head per annum. The police insist that all new houses shall have watertight cesspools, therefore it is not practical to put up a proper watercloset with a two-gallon flush in a new house. Where the cesspools are not watertight they, for the most part, infect the surrounding subsoil. A few cesspools, however, notably in the centre of the town, in the Rue des Bains, the Rue de la Mer, and the Rue Pellerin, have overflow pipes into the sewers. As the cesspools must be full before they overflow, the matter that reaches the sewers is very foul indeed and occasions serious nuisance. Many of the *tinettes* or pails are made of wood and have no lids. They sometimes remain two and even three months in a house before they are removed and empty ones put in their place. Of course fermentation sets in and the consequences are dangerous and intolerable. As regards the 320 houses that have no closets at all, at about 10 P.M. the occupants of these houses may be seen emptying their utensils into the stream of the Tonques, and, near the railway bridge especially, the nuisance this causes is very perceptible.

The slop water of all the houses is allowed to drain into the street gutters, and from the gutters gradually finds its way to the few sewers that exist in the town. These sewers, however, have insufficient fall; therefore heavy deposits are made in the sewers, the water flows very slowly, and when the tide is high the sea-water enters the mouth of the sewers and further checks the flow. Some houses, instead of draining into the gutter, which has at least the advantage of disconnecting the house from the sewer, are directly connected with the sewer, and the precaution has not been taken of trapping the pipes. Such houses, therefore, act as sewer ventilators and draw off the foul sewer air into the kitchens and dwelling rooms. These glaring defects are not, however, special to Trouville. They will be found in almost every part of France. What is special to Trouville and greatly to the honour of its administration is the fact that these evils are recognised and publicly denounced by the administration itself.

The municipality of Trouville has had under consideration three different schemes for the draining of the town. The first is the "*tout à l'égout*" or the English water-carriage system; but, in consequence of the bathing on the beach, there is no convenient outfall, and there is not a sufficient water-supply to flush the drains and sewers. It is estimated that the cost of building sewers, of increasing the water-supply and of management would amount to £36,400, and the cost of building waterclosets, drains &c. in the houses would amount to £79,600, making a total of £116,000. The second scheme is the Berlier system of pneumatic drainage. This is estimated to cost £56,272, or, according to a more recent project, augmenting considerably the length of the streets so as to reach the total of 22,000 metres, including ground that may in future be built upon, the estimate is £64,000. The objection to the Berlier system rests on the assumption that the evacuator under each house would cause a nuisance if the house were not inhabited. Where there is a large house and the evacuator is constantly filled and constantly emptied no complaint

arises; but in Trouville many of the houses are small and many are uninhabited for six months or more. It does not seem to me that there would be any great difficulty in flushing these evacuators at the end of each season. However, the municipality has given its preference to a project of pneumatic drainage which is more like the Liernur than the Berlier system. This is known in France as the *système aspirateur*, and a company, the Société Générale d'Assainissement, proposes to apply this system to the town of Trouville on terms which the municipality considers the most favourable and the most practical. The cost of application would amount on an average to £4 10*s.* per house. Air-tight suction sewers, 22,000 metres in length, with engine-house and works for producing vacuum &c., are estimated to cost £17,200, and the sewage is to be drawn off to a guano factory some miles distant from the town.

It is not for me at the present moment to investigate the respective merits of these rival schemes. It suffices to say that the worst scheme would be infinitely preferable to a continuation of the present state of affairs. This much in passing I will, however, urge—namely, that the scheme which has found favour with the Trouville municipality, in common with the Liernur system as I have seen it working at Amsterdam, does not ensure, but, on the contrary, hinders, the maintenance of the perfect cleanliness of the soil pipes within the houses. In the Liernur system and its French adaptation the soil pipe retains the soil till such time as a functionary draws it off by bringing to bear the pneumatic suction. But, however this may be, it is gratifying to find that the municipality of Trouville is stirring in the matter, and is determined that, in one way or another, its town shall be properly drained.

THE BRAIN OF THE LATE MR. GEORGE GROTE, F.R.S.

II

IN THE LANCET of Nov. 12th we referred to many interesting peculiarities in the brain of Mr. Grote, as reported on in the *Journal of Anatomy and Physiology* by the late Professor John Marshall, and we now add some further details as to this particular brain together with some suggestions on cerebral physiology by the same anatomist. The general form of the brain must depend greatly on the shape of the skull, and must to a great degree correspond with it. The extreme length of Mr. Grote's head still covered by the soft parts was 8·1 in., its extreme breadth 6·5 in.—a ratio of 100 to 81—and its circumference 22¼ in. Such a skull would be included among the brachycephalic, although it is just on the border-line; but a measurement of 15¼ in. from one auditory meatus to the other over the vertex shows that its height was the great characteristic, for this is quite half an inch above the average of an English skull with the same circumference. This peculiarity opens up the question whether an unusual height of the cranium is necessarily or usually associated with a relatively large cerebrum or a small cerebellum, or it is only correlated with a diminished size of the lower occipital fossæ of the skull? In long skulls (dolichocephalism) the intermastoid measurements are generally low, whilst in broad skulls (brachycephalism) they are high. But although in Mr. Grote's case the unusually high measurements over the vertex were associated with a large cerebrum and a relatively small cerebellum we have no data on which we can rely for a further pronouncement on such an interesting problem. The dimensions of the cranial fossæ occupied by the cerebellum must be much more fully mapped out on the skull and carefully taken and recorded before we can discuss this point, in view of national, racial and individual peculiarities, and particularly if such measurements are to be applied to the living subject.

Mr. Grote's brain, when removed from the skull, appeared broad in proportion to its length, and, whilst fully acknowledging the difficulty of defining and expressing the relative size and extent of the various lobes, Professor Marshall, from his naked-eye observations on other brains side by side with this one, came to the conclusion "that the frontal lobes of the cerebrum appeared to be very long on their upper surface, very wide in front of the Sylvian fissure, and both long and broad on their under surface; the parietal lobes were short and wide; the temporal lobes were also wide, though short; the occipital lobes were small and shallow." He has also suggested a valuable method of ascertaining the weights of the several lobes and their white conducting fibres, and gives full directions for making these dissections. "On being weighed, the several lobes were found to be in very nearly their usual proportion—a chief individual distinction being that the fronto-parietal mass was somewhat heavier than usual, this superiority being mainly due to an excess in the parietal lobes; the temporal lobes, however, were a little smaller, and the occipital lobes decidedly smaller than usual. The cerebral convolutions were very massive, being not only broad and deep, but well-formed and marked with secondary sulci over the whole cerebrum, but especially in the frontal and parietal regions." This relative development of different lobes and convolutions is now being studied in the light of experimental and pathological research, and has afforded us much exactitude of knowledge on localisation of function, especially in regard to the motorial area of the brain. Professor Marshall held a critical and most judicial view as to the results to be deduced from these experimental inquiries, observing that no amount of mere argument can touch the facts, however difficult they may be to understand, but that any use which is to be made of them must be cautious, reserved, and even hypothetical. Applying this method, he asks the following questions, after critically examining Mr. Grote's cerebrum:—"Supposing that we assume size and complexity of convolutions to be evidence of superior functional capacity, might we credit the very large orbital and anterior frontal regions of Mr. Grote's cerebrum with the active and able exercise of proper mental processes, and the relatively small occipital lobe with a comparative deficiency of conduct, or carelessness as to personal interests and safety? May we associate the relatively large convolutions in the frontal and parietal regions, before and behind the fissure of Rolando, with the large upper and lower limbs of a person nearly six feet, even though the purposive movements of those limbs are held in but moderate equilibrium or control by a comparatively small cerebellum? How shall the great breadth, yet comparative simplicity, of the inferior frontal convolution be interpreted in reference to any peculiarities as to verbal expression or lingual utterance? Was the bold development of the back convolutions associated with any great activity of visual perception or the relatively full development of the superior temporal convolution with any special appreciation of a love of sounds?"

Other marked peculiarities of Mr. Grote's brain were the relatively large quantity of white fibres and the asymmetry of the cerebral convolutions. This asymmetry is remarkably well shown in three photographs which are reproduced at the end of the article. Asymmetry, suggested Professor Marshall, could scarcely be correlated with the performance of higher intellectual processes, or with their more perfect performance, for it is difficult to detect any obvious advantage in purely intellectual operations, being, as it were, hampered by an asymmetrical apparatus. He refers it to the habit, common to and inherited by the human family, of using for special purposes the right hand more than the left, generation after generation, and to all the direct and indirect consequences arising therefrom throughout its organism. This chapter is to us the most interesting and suggestive in the article. In Mr. Grote's cerebrum it was apparent on transverse section that the broad and massive character of the convolutions was due to the relatively large amount of the white substance. The sectional area of the corpus callosum was $\frac{1}{4}\frac{1}{4}\frac{1}{4}$ths of a square inch, which is about six times the ordinary proportion when compared with the total area of the inner surface of the hemisphere. "It is obvious that so high a ratio of white commissural or radiating substance must have great significance as regards the more effectual utilisation of the grey matter itself. If the grey matter be the source or seat of all special actions, whether original or reflex, exercised by or within the cerebral hemispheres, the white fibres must be accredited with the offices, not only of bringing impressions from the confines of the human frame, and conveying impulses to its muscular apparatus, but likewise of utilising to the utmost the power of the grey matter by multiplied connexions of part with part, in countless lines of combination and reflection. Just as the usefulness of the apparatus employed in telegraphy is increased according to the number of its advehent and evehent wires, so the efficacy of a certain quantity of grey matter, containing a certain number of ganglionic corpuscles, is enhanced by the multiplicity and variety of the connexions and combinations of these latter. Whether for old or for recent impressions, the paths of intercourse, combination, contrast,

construction and volitional impulse would all be increased, and the efficiency of the cerebral apparatus be thus improved. Certain it is that, under normal conditions, a well-developed corpus callosum must add to the possible, if not to the actual, capacity for work of a bilateral cerebrum; and, although cases of its absence, unsuspected during life, are on record which require further investigation, yet its relative magnitude is undoubtedly associated with varieties in intelligence or training."

THE METROPOLITAN HOSPITAL SUNDAY FUND.

ON Friday, Nov. 25th, a meeting of the Council of this Fund, presided over by the Lord Mayor, was held at the Mansion House, for the purpose of considering the draft report of the Council, which stated that the twentieth year of collecting the fund had resulted, under the presidency of the Right Hon. Sir David Evans, in a total of £41,512, and that a further anonymous donation of £500—£250 to be used in providing surgical appliances and £250 in aid of the general fund—had been received. One legacy only, £105, had been received during the past year, and a donation of £1000 had again been most generously given by Sir Savile Crossley. The report was passed and the next annual meeting fixed for Tuesday, Dec. 13th.

Mr. Custance, the secretary of the Fund, intimated that the leading clergymen had been consulted, and it had been suggested that June 11th should be fixed for the hospital collection. Archbishop Vaughan had consented to put off the annual school collection in the Catholic Church, which happened to fall upon June 11th next year, to the 18th or the 25th of the same month. It was finally recommended that June 11th, 1893, should be adopted as the date on which the collection of the Fund should take place. The Rev. Dr. Marks proposed and the Rev. Dr. J. Kennedy seconded the following resolution, which was unanimously passed: "That it be recommended to the Committee of Distribution that all accounts presented under Law 4 of the Constitution on or from Jan. 1st, 1893, shall be audited by a chartered accountant."

A vote of thanks to the President concluded the meeting.

THE ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A MEETING of the committee of the Association of Fellows of the Royal College of Surgeons of England was held at 5.30 P.M. on Wednesday, November 30th. Mr. George Pollock, the President, occupied the chair. The minutes of the last meeting were read and confirmed. The hon. secretary read the reply which had been received from an official of the College in answer to the last communication which had been forwarded to him by the committee. This reply was considered by the committee to be of a very unsatisfactory character, inasmuch as the writer neither attempted to substantiate the allegations which had been categorically refuted by the committee, nor withdrew them. A long discussion then took place with reference to the course of action which should be pursued. In the first place, a letter was drafted expressing the regret of the committee that the inability or unwillingness of the gentleman in question to substantiate his repeated allegations had not led him frankly to withdraw them, and stating what course of action the committee would pursue. This letter was unanimously adopted, and the hon. secretary was directed to forward a copy of it to the gentleman concerned. In the second place, it was agreed that, in the event of no satisfactory reply to this communication being received within fourteen days, the hon. secretary should proceed at once with the publication of the whole correspondence, with a view to submitting it in the form of a pamphlet to the Fellows of the College.

A letter was read from the hon. secretary of the Members' Association asking to be favoured with a printed list of the names of the members of the Fellows' Association, as well as with a copy of their last report. The latter request was made with the view to the publication of a report of the proceedings of the Association of Members. The hon. secretary was directed to forward the "Further Account of the Proceedings of the Association of Fellows," published in June last, and to say that a printed list of the members of the Fellows' Association had not yet been issued.

This concluded the business of the meeting, and the committee adjourned.

DEATH FROM ELECTRICITY.

BY H. A. CLOWES, M.D., M.S. DURH. &c.

DEATHS from electricity have happily been of rare occurrence in this country. So far as I am aware, only five cases have been reported in the medical journals since 1880, though many cases have occurred in America and several on the Continent.

On the afternoon of Nov. 9th T. P. L——, aged twenty-three, an *employé* of the House-to-house Electric Supply Company, was engaged in making connexion with a house in Roland-gardens, Old Brompton-road, and while working in the surface box he was observed to fall to one side as if in a fit. A fellow-workman ran to him, and found him with his left arm contracted and attached by his left hand to the connecting wire. The wire was immediately broken by a blow with an axe handle, and when released he gave a loud sigh and fell forwards on to his forehead, but made no further movement or sound. He was brought in a cab to the Queen's Jubilee Hospital, where I saw him about five minutes after the occurrence. The heart and respiration had then stopped. The face, neck and upper extremities were congested, the eyes suffused and the pupils widely dilated. The features were not distorted and the face wore a peaceful expression. There was a strong smell of burning not unlike the smell of gas, and it was at first reported that the man had fallen down while working on a gas main. The palm and first two fingers of the left hand were burnt and charred and the fingers were strongly flexed. The clothing was not burnt or injured in any way. Artificial respiration was at once commenced, and was maintained for more than an hour, but the patient did not respond in any way, and it was evident that the case was hopeless. Besides artificial respiration an injection of strychnia was given, with the idea of stimulating the respiratory centre, and the faradaic current was applied to the precordia.

At the inquest, which was held on Nov. 14th, the current which the man received was said to have been a rapidly alternating one (10,000 alternations per minute) of a strength of about 2000 volts. It was not clearly shown how he had completed the circuit, for at the time of the accident he was holding only one wire with the left hand, which was burnt, but there was no other burn on any part of the body. The piece of wire which he held had in some way become denuded of the insulating rubber. A post-mortem examination was made three days and sixteen hours after death. The body was that of a well-developed, muscular young man, and the congestion of the face, neck and upper extremities and ocular conjunctiva remarked at the time of death was still noticeable. Rigor mortis, which had set in shortly after death and had been strongly marked, was still present to a slight extent in the lower extremities. Decomposition was not advanced in any unusual degree. The whole of the palmar surface of the forefinger and middle finger of the left hand was burnt and the tissues of the carpal half of these two fingers were destroyed and carbonised, exposing the flexor tendons. The epidermis generally of the palm of the hand, the palmar surface of the thumb, and of the cleft between the thumb and index finger was burnt black and separated from the deeper structures of the skin. On the dorsal surface of the hand, between the thumb and index finger, the epidermis was destroyed and missing over a surface the size of a florin. There was a small circular abrasion, not a burn, on the outer side of the right knee, and a small ecchymosis and swelling over the right frontal eminence. There were no other external marks of injury. The vessels of the scalp, meninges of the brain and brain substance were congested and full of liquid blood, and the surface of the white substances when cut across presented a punctate appearance. The lateral sinuses were full of liquid blood, and the lateral ventricles contained a fair amount of cerebro-spinal fluid.

The brain and cerebellum appeared quite healthy. The mucous surface of the larynx, trachea and bronchi was much congested and the lungs loaded with dark blood. Th heart was normal in size and consistence and its valves healthy. Although not contracted its cavities were completely empty and there was a deficiency of blood in the large vessels. The liver was much congested and of a dark-red colour. The spleen was large and engorged with blood. The kidneys were large (especially the left), congested and the condition of the tissues doubtful; the stomach and intestines were normal in appearance; the bladder contained about eight ounces of highly albuminous urine. A marked feature of the examination was the complete fluidity and dark colour of the blood, not a clot being discovered in any part of the body. My colleague, Dr. Thudichum, who kindly made a microscopic examination of the blood and nerve tissues, supplies the following note: "Blood quite fluid, without any coagula, and remains fluid on being kept; medulla oblongata and amido-myelin coagulated; no other structural change." He adds: "Electrical current derived from wire to earth 10,000 alternations per minute, causing 20,000 shocks of contraction per minute, practically tetanus."

Walterton-road, W.

THE ROYAL SOCIETY.

THE Royal Society has on many occasions recognised the scientific work of medical men, and among the names which it delights to honour are not a few that are associated with those sciences which have been cultivated chiefly for the purposes of the art of healing. Last Wednesday's dinner, and the formal presentation of medals which accompanied it, has made an addition to the number of such names which are inscribed upon the medal roll of the Society. Foremost among them the recipient of the Copley medal, which has been termed "the laurel wreath of the Royal Society," was the venerable Virchow of Berlin, whose name—although connected by the terms of the award as well with prehistoric archæology as with pathology and pathological anatomy, and by Professor Huxley in his very interesting speech with the even remoter field of politics—is of European reputation because of its bearer's brilliant discoveries in pathological science. Mr. Langley, of Cambridge, the recipient of the second royal medal, is a brilliant representative of the younger ranks of the medical profession. On this occasion he acquitted himself in the difficult office of replying to the toast in honour of the medallists, in behalf of his absent colleagues as well as of himself, in a style which proves that the faculty of after-dinner speaking, rare as it is, is not denied to some of those to whom the greater qualities which make a successful investigator of Nature's secret truths have been vouchsafed in liberal measure. No one, moreover, who listened to Lord Kelvin's and Professor Huxley's most interesting speeches could doubt that this double qualification, if an exception, is an exception which comes near to proving a rule at the Royal Society's hospitable board. It hardly needs to be added that the Fellows assembled included a due proportion of the medical profession collected from London and the provinces, and that Sir James Paget's eloquent welcome of the Society's guests fitly represented this side of the great Institution's connexion with the profession of medicine.

ROYAL BRITISH NURSES' ASSOCIATION.

THE PETITION FOR A CHARTER.

THE Committee of the Privy Council, consisting of the Marquis of Ripon, Lord Oxenbridge, Lord Hobhouse and Lord Hannen, resumed on Monday last their consideration of the petition made on behalf of the Royal British Nurses' Association for a charter of incorporation.

Sir Richard Webster, Q.C., continued his speech for the opponents of the petition. Dealing first with the Register of the Association, he asserted that it contained not 2700 as his learned friend Sir Horace Davey had said, but only 1777 names, and that there were in the country about 5000 trained nurses and between 5000 and 15,000 more persons who might to a certain extent be allowed to come upon the Register. Of the 1777 nurses on the Register of the Association there were upwards of 600 who had no hospital qualification at all, and a still larger number who had nothing like the three years' qualification which was put forward as the main aim and object of the Association. Up to a certain date the Association allowed nurses on the Register without certain qualifications, and the number who took advantage of this period of grace was no less than 1623. Since that time there had not been a corresponding increase in the number registered. Each year the Association sent out a circular which did nothing more than inquire as to the accuracy of the name and address. From an examination of the present Register it was found that of the 1777 entries no less than 312 were not verified as to the accuracy of the name and address up to date. Moreover, there were objections of a more serious character. There were upon this Register the names of persons who had been dismissed for misconduct from the hospitals. Further, he might point out that no application of any kind had been made to the hospitals with reference to individuals whose names appeared on the Register.

Sir Horace Davey, Q.C., for the Association, said his instructions were to a contrary effect.

Sir Richard Webster replied that both in the case of the London Hospital and St. Thomas's Hospital no application of any kind had been made with reference to a large number of nurses whose names appeared on the Register.

The Marquis of Ripon asked whether their lordships were to understand that no application had been made to hospitals in any case.

Sir Richard Webster said he did not mean those two hospitals only, although those he was prepared to prove, but speaking for a large number of the hospitals for which he appeared—seven hospitals having training schools—no application was made to them prior to the names being placed upon the Register.

The Marquis of Ripon: In the first instance?

Sir Richard Webster replied that in a great majority of the cases no application had been made at all. Latterly there had been application made with reference to some of the nurses with respect to whom information was given, but with regard to putting the names on the Register or continuing them there no application was made either to the hospital or the training school. Proceeding with his case, Sir Richard Webster submitted that there was no precedent for such a Register as that of the Association receiving the sanction of a Royal Charter. If the Association merely wished to publish a list of their members, they could do so by their by-laws and without the aid of a charter; but what they desired was an authentic Register to which every nurse seeking a full opportunity of employment must apply for admission. Such powers as the Association sought should only be given after a full Parliamentary inquiry, where the merits of the case could be discussed and evidence taken. The allegations he had made were supported by nine-tenths of the people who had been engaged in training nurses for the last thirty or forty years. Taking the hospitals of London, there were four with 1540 beds which supported the petition and eight with 2751 beds which opposed it. As to the provincial hospitals, there were seven which supported the petition and eleven which opposed it. In every case among the seven there were those who only gave the petition a partial support. It amounted to this, that there were altogether thirty large nurse-training institutions, of which nineteen with 6000 beds were opposed to this Register, as against eleven with 2622 beds which were wholly or in part in favour of it. Not only was the support not that of the majority of those who were skilled in training nurses, but there was excluded from the governing body, who asked by this charter to be constituted the authority for nurses, many of those ladies and gentlemen who were most competent to consider what was a proper qualification for nurses. The object of the Association was that the control of the nursing profession should be in the hands of medical men and nurses, therefore this was a point which he was entitled to press before their lordships. He might say that a charter had already been granted to the Queen Victoria Jubilee Institute. That charter did not provide for any register of nurses. In that case nurses were entitled to be members after one year's training. They were allowed to be called "Queen's nurses" and to wear a certain badge. It was surely a most remarkable thing that those Queen's nurses, sanctioned by Royal Charter and having privileges given them, would not be entitled to entry in this Register. The sting of the thing was that this would be the

Register of trained nurses for the year, meaning that those who were not upon it should not be considered trained nurses. He must humbly but firmly protest against the attitude of his clients being misrepresented or distorted. They were not there to object to a charter which would confine itself to proper work, as, for instance, the collection of funds, the improvement of nurses and the establishment of colleges; but they said that under colour of this application the Association were desirous of obtaining a chartered Register which would be the means of their holding out directly to the public that nurses who were not upon it were not trained nurses in whom the public ought to place reliance. If the procedure permitted of it, he desired to call witnesses. He desired to show that the mere standard of three years' work in nursing the sick was not by any means a satisfactory condition of the training of a nurse, and that many persons did become quite skilled and qualified in less than three years. He wished also to show that the hospitals remained in communication with their nurses for years after granting them their certificates, and could obtain information as regarded their fitness for their work.

The Marquis of Ripon said that in his experience he did not recollect any case of the kind where evidence was heard.

Sir Richard Webster submitted that if the merits required investigation some tribunal must be found for it.

Lord Hobhouse said his impression was that the points stated by counsel would not very much affect the issue.

The Marquis of Ripon said that at present he did not see any necessity for evidence, but their lordships would consider the matter.

Sir Horace Davey then replied on behalf of the Association. He understood that the opponents of the charter did not allege that the objects of the Association other than the keeping of a Register were not such as to deserve approbation and commendation, and reasonably entitle the Association to the status of a corporate body.

Sir Richard Webster admitted this to be the case, but said the whole matter was for the consideration of their lordships.

Sir Horace Davey, proceeding with his reply, said he was not surprised to find such a small proportion of nurses members of the Association, having regard to the opposition it had encountered and the misapprehension of motives, objects and aims to which it had been exposed. He denied that the Association had not applied to the hospital authorities for information prior to the registration of names, and produced to their lordships circular letters which the Association had been accustomed to send not only to the referees whose names had been furnished, but also to the hospitals concerned. This was a case in which nurses and medical men wished to manage their own affairs. They asked not to be under the complete supervision and control which apparently the training colleges desired to keep them. The question here was whether those nurses who were not on the books of the hospitals, and who had no means of getting there, were to be excluded from the exercise of their profession; whether those hospitals and training colleges were to have the exclusive right of furnishing the public with nurses. His clients desired the status of a chartered company, not to prevent other people from earning their living, but to keep a Register on which people if they thought fit could enter their names and be published to the world. There was no compulsion about the Register, it was of a purely voluntary character. It certainly would be very much better if many of the hospitals gave the Association their assistance. King's College Hospital answered their letters and gave them all the information they possessed, and if the other training schools would follow that example he thought it would conduce to improving the Register.

Lord Hannen put it to Sir Horace Davey whether the Association wished it to be clear that this only purported to be a Register of nurses who had applied to have their names put there.

Sir Horace Davey said that was already clear, but he did not object to a suitable alteration being made.

The hearing was then concluded, their lordships announcing that they did not propose to examine witnesses. It now falls to the committee to advise Her Majesty as to the course she should pursue with regard to the petition.

A NEW COMMISSION OF LIEUTENANCY has been issued for the City of London, and among the names of those who have been appointed Her Majesty's Lieutenants are the following medical men:—William Sedgwick Saunders, M.D., F.S.A., Thos. Boor Crosby, M.D., and Charles Brodie Sewell, M.D.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

On Typhus Fever at Wigan and Ince-in-Makerfield, by Dr. S. MONCKTON COPEMAN.[1]—Dr. Copeman's report on this outbreak of typhus fever is of a somewhat exceptional character, for it enters with much more detail than is usual in these official reports into the clinical characters &c. of the disease. This attitude is the more fortunate because so few medical practitioners and so few health officers have now an opportunity of seeing typhus fever, and some very deplorable results have, in more instances than one, ensued, which would have been avoided had the first attacks been recognised as typhus fever in their early stages. The report has, under these circumstances, an interest quite beyond the usual health reports; and it will be read with profit by all who are likely at any time to have to identify and to treat this now uncommon form of continued fever. We are glad therefore that the report has been placed on sale. The disease commenced in Wigan in August, 1891, it reached its height in October and November, and ceased towards the end of March this year. In all, there were 78 cases occurring in 48 families, with 10 deaths. But the disease was not heard of officially until September 24th, and it was this that really led to the diffusion of the malady. Prompt isolation was instantly resorted to, but, says Dr. Copeman, "every single household invasion, with one exception, was traceable directly or indirectly" to the family of the first patient, who lived in a back-to-back house and who was assumed to have suffered from pneumonia. The spread is well indicated by means of a diagrammatic pedigree tree. Much pains was taken to trace the first case to its source, but although there seemed indications that Liverpool, where the disease constantly reappears, was the actual source, yet this cannot be said to be proved. The disease spread from Wigan to Ince-in-Makerfield, the adjoining township, and here again its nature was much obscured, by reason of an unexpected disease being classed under other headings than that of typhus fever. It is this that gives such special interest to the lengthened account of the "Clinical Considerations" which are involved and which are so well illustrated by a series of charts and tables. We believe this is the first printed report which has been issued of Dr. Copeman's work since he exchanged his labours at St. Thomas's Hospital for those at Whitehall. If it is a type of future ones, all will agree that his experience as a clinical physician has admirably prepared him for the career he has now chosen.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Birmingham Urban District.—Dr. Alfred Hill gives the recorded death-rate for Birmingham during 1891 as 21·7 per 1000, the zymotic rate being 2·1, and the infant mortality at the rate of 171 per 1000 births. There was some small-pox in the borough and 44 cases were removed to the small-pox hospital. Scarlet fever was also prevalent, 1201 cases being placed under isolation in the hospital reserved for that disease. A general account of the sanitary work of the year is given under different headings, and a disease chart, tables &c., are added; but small-pox is significantly omitted from the chart. Dr. Hill, in dealing with the proposed new water-supply for Birmingham, refers to his inspection of the watersheds of the Elan and Claerwen, where he found the conditions eminently favourable, and, above all, such as to reduce to a minimum all chance of the possibility of any dangerous pollution. Samples of the water were taken; they are very soft, and contain some colouring matter of peat. Both these conditions remind us of circumstances favourable to the occasional taking up of lead from service-pipes, but the samples examined had only a very slight action upon the metal; and this slight amount could, it is believed, be reduced by storage and filtration.

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[1] Eyre and Spottiswoode, East Harding-street, E.C.; John Menzies and Co., Edinburgh and Glasgow; Hodges, Figgis and Co., Dublin. 1892. Price 1s.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6020 births and 3694 deaths were registered during the week ending Nov. 26th. The annual rate of mortality in these towns, which had declined from 19·6 to 18·6 in the preceding two weeks, rose again to 18·9 last week. In London the rate of mortality was 17·7 per 1000, while it averaged 19·8 in the thirty-two provincial towns. The lowest rates in these towns were 13·6 in Derby, 15·6 in Bristol, 15·7 in Croydon, and 15·9 in Gateshead; the highest rates were 22·9 in Manchester, 23·1 in Plymouth, 24·2 in Halifax, 26·9 in Blackburn, and 31·6 in Salford. The 3694 deaths included 423 which were referred to the principal zymotic diseases, against 431 and 392 in the preceding two weeks; of these, 142 resulted from measles, 73 from scarlet fever, 65 from whooping-cough, 61 from diphtheria, 40 from diarrhœa, 39 from "fever" (principally enteric), and 3 from small-pox. No fatal case of any of these diseases occurred last week either in Wolverhampton or in Gateshead; in the other towns they caused the lowest death-rates in Sunderland, Norwich, Derby, and Bristol, and the highest rates in Leicester, Brighton, Croydon and Salford. The greatest mortality from measles occurred in West Ham, Huddersfield, Hull, Brighton, Croydon and Salford; from scarlet fever in Preston, Blackburn and Plymouth; from whooping-cough in Birmingham, Birkenhead, Salford and Preston; from "fever" in Swansea; and from diarrhœa in Halifax. The 61 deaths from diphtheria included 46 in London and 4 in Manchester. Two fatal cases of small-pox were registered in Leicester and one in London, but not one in any other of the thirty-three large towns; 16 cases of this disease were under treatment in the Metropolitan Asylum Hospitals and 2 in the Highgate Small-pox Hospital on Saturday last. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 3944, against numbers declining from 4067 to 4045 at the end of the preceding three weeks; 302 new cases were admitted during the week, against 403 and 404 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 357 and 340 in the preceding two weeks, rose again to 353 last week, but were 90 below the corrected average. The causes of 79, or 2·1 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Cardiff, Leeds, Sunderland, and in six other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Leicester, Blackburn, Huddersfield and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 20·6 and 21·5 per 1000 in the preceding two weeks, rose again to 23·7 during the week ending Nov. 26th, and exceeded by 4·8 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 13·6 in Paisley and 13·7 in Perth to 24·0 in Edinburgh and 58·0 in Leith. The 661 deaths in these towns included 104 which were referred to measles, 28 to scarlet fever, 9 to diphtheria, 9 to whooping-cough, 7 to diarrhœa, 4 to "fever," and 1 to small-pox. In all, 162 deaths resulted from these principal zymotic diseases, against 110 and 127 in the preceding two weeks. These 162 deaths were equal to an annual rate of 5·8 per 1000, which exceeded by 3·6 the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had been 61 and 65 in the preceding two weeks, further rose to 104 last week, of which 41 occurred in Leith, 29 in Edinburgh, 16 in Glasgow, and 13 in Aberdeen. The deaths referred to scarlet fever, which had increased from 13 to 24 in the preceding three weeks, further rose to 28 last week, and included 18 in Glasgow and 6 in Leith. The 9 fatal cases of diphtheria also showed a further increase upon recent weekly numbers, and included 3 in Glasgow and 3 in Edinburgh. The 9 deaths from whooping-cough exceeded by 2 the number in the previous week, and were all recorded in Glasgow, where the fatal case of small-pox also occurred. The deaths referred to diseases of the respiratory organs in these towns, which had been 142 and 137 in the preceding two weeks, were 141 last week, and were less than half the number in the corresponding week of last year, when an epidemic of influenza prevailed. The causes of 59, or nearly 9 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 23·9 per 1000 in each of the preceding two weeks, declined to 22·8 during the week ending Nov. 26th. During the first eight weeks of the current quarter the death-rate in the city averaged 23·1 per 1000, against 17·9 in London and 21·9 in Edinburgh. The 153 deaths in Dublin during the week under notice showed a decline of 7 from the number in the preceding week, and included 4 which were referred to "fever," 2 to diarrhœa, one to whooping-cough, and not one either to small-pox, measles, scarlet fever, or diphtheria. In all, 7 deaths resulted from these principal zymotic diseases, equal to an annual rate of 1·0 per 1000, the zymotic death-rate during the same period being 1·7 in London and 7·3 in Edinburgh. The deaths referred to different forms of "fever," which had declined from 10 to 2 in the preceding three weeks, rose again to 4 last week. The fatal cases of diarrhœa, which had been 2 and 5 in the preceding two weeks, declined again to 2 last week. The 153 deaths registered in Dublin last week included 25 of infants under one year of age and 41 of persons aged upwards of sixty years; the deaths, both of infants and of elderly persons, showed a slight decline from the numbers recorded in the preceding week. Three inquest cases and 4 deaths from violence were registered; and 53, or more than a third of the deaths, occurred in public institutions. The causes of 10, or nearly 7 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS OF MEDICAL STAFF.

SURGEON-COLONEL WADE, Brigade-Surgeon-Lieutenant-Colonel Evatt, Surgeon-Captains Elkington and McCree have arrived from India. Brigade-Surgeon-Lieutenant-Colonel Burnett has been appointed to Fermoy. The following Officers have embarked for India in the *Serapis*:—Surgeon-Major J. F. Brodie and Surgeon-Captains de Courcy Scanlan, Faichnie and Kirkpatrick. Surgeon-Major Martin has arrived in Bombay and Surgeon-Captain Allport in Ceylon. Surgeon-Captain Hale has been appointed to the Eastern District, Surgeon-Captain Burton to Lichfield and Surgeon-Captain Wiles to Hulme. Surgeon-Captain Beatty has embarked for Sierra Leone. Surgeon-Major H. Saunders, now at Malta, has been appointed to the King's Dragoon Guards, now forming part of the Queen's Guard at Windsor.

INDIAN MEDICAL SERVICE.

The following Surgeon-Majors who have completed twenty years' full-pay service have been appointed Surgeon-Lieutenant-Colonels:—Mathew Denis Moriarty, M.D.; Gordon Price, M.D.; Edward Bevill, M.B.; Bartholomew O'Brien, M.D.; Henry Walter Hill, M.D.; Zainor Allee Ahmed, M.D.; William Arthur Gilligan and William Edwin Griffiths. The following Surgeon-Captains having completed twelve years' full-pay service are promoted to Surgeon-Majors:—George Michael James Giles, M.B.; Arthur Robert Wyatt Sedgefield, M.B.; Edwin Francis Horatio Dobson, M.B., Johnston Shearer, M.B.; Hem Chandra Banerji; Shambu Chandra Nandi, M.B.; Francis Samuel Peck and William Deane. The services of the undermentioned Medical Officers have been replaced at the disposal of the Government of Madras:—Surgeon-Major J. C. Marsden and Surgeon-Major R. Pemberton. Surgeon-Major D. S. E. Bain has been appointed Civil Surgeon of Coorg. The services of Brigade-Surgeon-Lieutenant-Colonel R. Bowman, Residency Surgeon in Turkish Arabia, have been replaced at the disposal of the Bombay Government. Surgeon-Major F. Day, attached to the Station Hospital at Deolali, has been transferred to the Station Hospital at Colaba. Surgeon-Lieutenants T. Jackson, F. E. Swinton and S. H. Burnett, Medical Staff, on arrival from England, have been ordered to Poona to be attached to the Station Hospital at that Station. The services of Surgeon-Colonel Richardson, Officiating Surgeon-General with the Government of India, are placed at the disposal of the Government of the North-West Provinces.

NAVAL MEDICAL SERVICE.

The following appointments have been made:—Surgeons: H. S. Archdell, F. H. Clayton, R. J. Fyffe, P. Lord, F. J. A. Dalton, P. M. May, C. L. Bunton, F. D. Lumley, H. E. Tomlinson, A. S. G. Bell and B. Gilpin to the *Victory* additional for hospital; D. J. P. McNabb to the *St. Vincent*. Surgeon and Agent: J. E. F. Andre, at Chicested Harbour, East Wittering, Thorney and Selsey. The following qualified candidate for the Naval Medical Service has been appointed Surgeon in Her Majesty's Fleet:—Edward Thomas Meagher.

VOLUNTEERS.

The following promotions have been made:—2nd East Riding of Yorkshire (Western Division Royal Artillery), Surgeon-Captain J. Sherburn, M.B., to be Surgeon-Major; 1st Herefordshire, Surgeon-Lieutenant. J. W. Hinings to be Surgeon-Captain; 2nd (Westmoreland) Volunteer Battalion, the Border Regiment, William Baron Cockill, Gent., to be Surgeon-Lieutenant.

THE VOLUNTEER OFFICERS' DECORATION.

This decoration has been conferred upon the undermentioned officers.—*North-Eastern District:* 1st Berwick-on-Tweed, Surgeon-Major George Bolton; 2nd Durham (Seaham) (Western Division, Royal Artillery), Surgeon-Lieutenant-Colonel Thomas Carlyle Beatty and Surgeon-Lieutenant-Colonel Thomas Gibbon; 4th Durham (Western Division, Royal Artillery), Surgeon-Lieutenant-Colonel Samuel Gourley; 1st Lincolnshire (Western Division, Royal Artillery), Surgeon and Honorary Surgeon-Major Thomas Small, retired, and Quartermaster and Honorary Captain Richard Varley; 2nd West Riding of Yorkshire (Western Division, Royal Artillery), Surgeon-Lieutenant-Colonel Harry Meade; 2nd Volunteer Battalion, the Northumberland Fusiliers, Surgeon-Major Adam Wilson; 1st Volunteer Battalion, the Lincolnshire Regiment, Surgeon-Lieutenant Hugh George, M.D., Surgeon-Major John West Walker, M.B., retired, and Surgeon and Honorary Surgeon-Major Charles Bartholomew Moody, retired; 3rd Volunteer Battalion, the Prince of Wales's Own (West Yorkshire Regiment), Brigade-Surgeon-Lieutenant-Colonel Jas. Scarborough Loe; 1st Volunteer Battalion, the Leicestershire Regiment, Surgeon and Honorary Surgeon-Major Edwd. Rawson Denton, retired; 1st Volunteer Battalion, the Duke of Wellington's (West Riding Regiment), Surgeon-Lieutenant-Colonel J. E. Foster; 2nd Volunteer Battalion, the Sherwood Foresters (Derbyshire Regiment), Brigade-Surgeon-Lieutenant-Colonel William Milligan and Surgeon-Lieutenant-Colonel Edward Mason Wrench; 1st Nottinghamshire (Robin Hood) Rifle Volunteers, Surgeon-Lieutenant-Colonel Thomas Wright and Surgeon-Major John O'Connell Hynes; 2nd Volunteers Battalion, the York and Lancaster Regiment, Brigade-Surgeon-Lieutenant-Colonel John Blackburne, Brigade-Surgeon-Lieutenant-Colonel John Mitchell, and Surgeon and Honorary Surgeon-Major Charles Nattrass, M.D., retired.

VOLUNTEER MEDICAL STAFF CORPS.

Maidstone Division: Surgeon-Lieutenant-Colonel David Henry Monckton, M.D.—*South-Eastern District:* 1st Sussex Artillery Volunteers (Eastern Division, Royal Artillery), Surgeon-Major William Seymour Burrows; 2nd (the Weald of Kent) Volunteer Battalion, the Buffs (East Kent Regiment), Surgeon-Lieutenant-Colonel Henry Benjamin Wood, M.D., retired; 2nd Volunteer Battalion, the Royal Sussex Regiment, Brigade-Surgeon-Lieutenant-Colonel Charles Francis Lewis. *Woolwich District:* Surgeon-Lieutenant-Colonel William Warman Coleman, retired.

A SYSTEM OF SANITARY LEGISLATION FOR INDIA.

Brigade-Surgeon-Lieutenant-Colonel Climo has recently published an elaborate pamphlet on "The Hygienic Conditions of Indian Cantonments." He contends that subsoil sewage pollution has been the result of more or less chronic surface impurity, resulting from the over-population of limited areas coupled with defective or inadequate sanitary measures. He points out that the present hygienic conditions of Indian cantonments all tend to pollute occupied areas with organic refuse and to give rise to a sewage-loaded soil which breeds enteric fever. He argues that a system of sanitary legislation should be organised and adopted for India on similar lines to that which is pursued in Great Britain, and advocates the formation of a central sanitary authority entrusted with certain powers by the Government of India, and acting under the orders of the Commander-in-Chief, together with a local sanitary authority for each cantonment acting in concert with, but subordinate to, the central one. This organisation would, in reality, constitute a public health department with power to initiate sanitary work, make by-laws, and enforce the application and execution of sanitary measures, and exercise generally a sanitary supervision over all matters affecting public health in and around cantonments.

MEDICAL OFFICERS AND NATIVE STATES.

Our Indian contemporary, the *Civil and Military Gazette*, recently published an article setting forth the difficulties which the Punjab Government had got into with the leading Punjab chiefs in the matter of medical advice. The Rajah of a native state, like other people, naturally desires to choose his own medical adviser, and applies to the Government for permission to have the services of the medical officer of his choice; the Punjab Government, on the other hand, is desirous of making the selection for him. Of course the Local Government is acting strictly within its rights and powers in this matter, but the wisdom and expediency of the course are not very apparent. Anyway, the native chief, failing to get the particular medical officer he wants, goes elsewhere to secure a medical adviser, and the appointment is lost to the medical service in India. It is unfortunate, says the *Civil and Military Gazette*, that this question of medical service by British officers in native states, which ought to be fruitful of political good, should become a source more fruitful of irritation and friction than anything else.

THE ARMY MEDICAL STAFF.

It is stated, on the authority of *The Broad Arrow and Naval and Military Gazette*, that Sir William Mackinnon, the Director-General of the Army Medical Department, has given the following opinions on points referred to him by the Secretary of State for War: (1st) That as regards foreign service he is in favour of reverting to the old tour of five years for India; (2nd) that as to purely military titles, although personally adverse to them, he has been bound to allow that the large majority of his officers are in favour of their being conceded; (3rd) that the formation of a Royal corps has his emphatic approval; (4th) that interference with his power to sanction or object to exchanges is to be deprecated. We need scarcely add that we concur in these views; for we have always been opposed to the increase of the length of foreign tours as prejudicial to medical officers in many ways, especially as regards health; and years ago, when the regimental system was in force and the adoption of the present unification system was under discussion we strongly advocated the formation of a Royal Corps of Surgeons or a Royal Medical Staff Corps. As this has since been recommended in the reports of committees, and is, in our opinion, a fit and proper designation for such a large and important body as the medical staff, we trust that Mr. Campbell-Bannerman, the new Secretary of State for War, may see his way to giving effect to it. We are of opinion that exchanges between medical officers should be allowed subject to the approval of the head of the department.

AGE RETIREMENTS OF MEDICAL OFFICERS.

On a late occasion we did not discuss this question because we did not consider that, in the case alluded to, it admitted of doubt, or that there was any intention on the part of the head of the Medical Department of departing from the course laid down in the regulations of the service. The question of compulsory retirement has again arisen, however, in connexion with the rank of Surgeon-Major-Generals. We can only repeat now what we have always held and urged, that, as a matter of principle and as the only just and fair method of administering a large department, the Royal warrants and regulations in force at the time should be strictly adhered to. The terms of existing regulations, no doubt, admit of the retention of officers under exceptional circumstances for the absolute good of the service, but such cases should be very rare and should be provided for, in our opinion, at the expense of the State, for whose benefit they are made. Officers so retained should be seconded in order to prevent blocks in promotion and injustice to others; and this must, we imagine, commend itself to all as a just and fair principle of administration.

THE ARMY MEDICAL STAFF CORPS.

In order that it may not escape the notice of officers of the Medical Staff, who are naturally interested in all that concerns the good name and welfare of the men of the Medical Staff Corps, we think the recent decoration of First-Class Staff-

Sergeant Charles Williams of that corps should be recorded. Her Majesty at Windsor Castle on the 25th ult. decorated the Staff-Sergeant for distinguished conduct in the field, and especially at the engagement of Abu Klea where Colonel Burnaby was killed. As the square was being hardly pressed by the enemy Staff-Sergeant Williams and the other members of his corps, about fifteen in number, heroically rushed from time to time from the ranks and rescued some eighty or ninety wounded soldiers lying upon the field and successfully conveyed them to the shelter of the inside of the square. Staff-Sergeant Williams and the Medical Staff Corps were exposed to a galling fire from the Soudanese, and the rescuing of the wounded under the circumstances was very risky work. Those who have had experience of some of the fighting in Egypt and of the impetuous valour of the Arabs, which has been graphically depicted in Rudyard Kipling's verses, can best understand the plucky nature of the service rendered.

Correspondence.

"Audi alteram partem."

"EXPERIMENTS ON ANIMALS."

To the Editors of THE LANCET.

SIRS,—First a word in reply to Mr. Bowreman Jessett's letter, which consists of a series of questions, most of which are conundrums. He says he can find no mention of my method of flap-splitting for the purpose of intestinal repair in any of the surgical literature at his disposal; yet if he will turn to Vol. III. of the Transactions of the British Gynæcological Society, page 367, he will find what he wants not far from his elbow. I have not yet fully published my views on intestinal surgery; I have had so many much more important questions to settle that such little by-paths as that in question have to wait. Yet I am sure no one will quarrel with me as being a person of idle or neglectful habits, nor can I say that the medical societies or the medical journals have been churlish of placing their opportunities or their space at my disposal. Truly I find art long and life brief, and, struggle all I can, time fails me to get out my second volume, in which such details as Mr. Jessett wants will be found more fully recorded. He misrepresents me entirely when he says that I would not have any operation done on myself save as I do it. What I did say is that I would not submit to any operation myself save what I do on others. I would not submit to pylorectomy, for instance, or gastro-enterostomy, or to any of those nonsensical proceedings which give no ultimate benefit. Now, as to your leading article on this subject. I have no right to thank you for it, but I do so most heartily, for it indicates a new departure, and a very wise one, in this discussion, and I do not fail to recognise most gratefully your kindly intent towards myself and my attitude upon this troublesome question. It has been all my life my misfortune to live and grow in an atmosphere of minorities, and that is always a source of trouble. In politics, religion, ethics and medicine it has always been the same, and I have come to regard the resulting warfare and struggle as inevitable. I have already lived to see many of my minorities turned into consenting majorities, and I am hopeful to see the same result follow in other instances, and your article is one which gives me hope about vivisection. You do me justice when you say it is on the utilitarian standpoint that I take the issue. As a Radical I hate standing armies and war and all that belongs to it; but I should, like the Quaker, say to a boarding enemy, "Friend, thou hast no business here," and pitch him overboard if I could.

You say that the discussion of the question of experiments on living animals has passed beyond the stage of recrimination. I confess I wish this were true, but certainly within the past few weeks it has been shown to be not the fact. I trust that I may be believed when I say that I have during the past fourteen years, in which I have taken part in the controversy from time to time, done my very best to induce those whose views I share to use moderate language. I have not always succeeded, I am sorry to say; but for myself I desire once for all to say that I deeply regret any word and every word that I may have used without due care, and which may have caused anyone who does not agree with me the slightest pain. Anything which I may have said which deserves this apology has been said under provocation, and of that I have had more than a fair share.

You submit two questions for discussion, and I agree with the postulates entirely if you will change the verb of the present tense into the past perfect, and say: "1. *Have* experiments on animals *been* justified by the results obtained? 2. *Have* such experiments *been* carried on under proper restrictions and by qualified and humane investigators in this country?" You give an unqualified affirmative in answer to the questions in the present tense; but can you do so with equal assurance if the past perfect tense is used? For the public it is by the evidence of the past that suspicion is raised concerning the present, and when I find an all-round defence of the past entered into by sweeping general statements I cannot wonder at them doubting the present. The worst enemy of the man who honestly desires to aid the advance of his profession by modern research is the exalted physician and surgeon or the misguided journalist who testifies that in the past everything has been useful and good. A common-sense attitude to take would be that in times of old rough methods were used, often fruitlessly and with misleading results. At odd times we may have to revert to such methods, just as in abdominal surgery we have now and then to go back to the cautery to arrest bleeding. But to bring back the illustrations of Harvey's well-meant and inevitable bunglings, or Everard Home's misunderstanding of Hunter's clinical reasoning, as illustrations of what is necessary now in methods for everyday and wholesome use is unreasonable, is fallacious and, from a political point of view, is dangerous. Even in the illustration of Von Graefe's work, ignorant though I am of modern ophthalmic surgery, I now know that I was quite right and that Von Graefe's conclusion was a purely empirical one, and not based—not even confirmed—by experiments on animals. Similarly I might assure you, did your space and the patience of your readers permit, that in my own department the labours of Pasteur and Lister had not only nothing to do with my success, but, on the contrary, my success only came to me when I had completely disregarded the entanglements into which their teaching had led me. Since I left their following I have ceaselessly been engaged in combating their mistaken application of the facts relating to dead tissue to the treatment of the living.

But a truce to polemics. Your article deserves thanks, not contention. You are kind enough to say I am a keen, perhaps an obstinate, controversialist, and that you hope I may be ere long convinced that there is some good in vivisection. Would you be surprised to hear that I have admitted as much long ago, and who could doubt it after the masterly (no word is too good for it) unravelling of the sardine poisoning case the other day by Dr. Stevenson? This prince of toxicologists "vivisected" some mice and guinea-pigs, and proved his case; but with it all there is a suspicion in my mind that if modern chemistry would give itself up to such work seriously, that splendid science could prove the presence of these mysterious poisons in a way far better than that of trusting to the random mediæval method of poisoning mice and guinea-pigs. The spectroscope solved in a trice the other day the mystery of the "winking star" for the astronomer. Is not the possibility of sardine poisoning, open to all and any of us, a far more important matter than the size and shape of the orbit of Algol? It seems to me a rank discredit that we have to plead a necessity for vivisection *in any case*. It is so transparently unscientific—that is, inexact. Let my brethren bear in mind that this method of research after knowledge, be it useful or be it useless, stands absolutely alone in being objectionable to anyone. Not the astronomer, nor the chemist, nor the physicist, nor any one else among scientific men has had to defend or excuse anyone of his methods of research. Is it not time that we began to at least apologise for this *bête noire* of ours? Not to defend it, but to express sorrow that our methods are so primitive, our science so crude, that it is still necessary—if it really is so. Further, should we not say that we regret it; should we not undertake to restrict it as far as possible, and keep it out of the horrors of the past as much as we can? And then, should we not religiously and zealously move with all our might to replace it by better methods and exhaust all other methods first?

Even these protestations—and the bulk of us would be honest in them—would go a long way to keep moderate-

minded men on our side, but to make an all-round defence of everything that has been done is mere folly.

I am, Sirs, yours truly,

Birmingham, Nov. 28th, 1892. LAWSON TAIT.

"DEATH FROM IRRITATION OF ASCARIDES."

To the Editors of THE LANCET.

SIRS,—I think I may claim to have strong testimony to support Dr. Beaven Rake's contention in your last issue of the important part which human entozoa play in the etiology of disease. I have just completed a voyage in charge of 557 Indian coolie emigrants from Calcutta to Demerara that occupied eighty-seven days. Last year, from symptoms I observed in a similar cargo bound to Jamaica, I was led to suspect the general presence of round worms in Indian coolies. Griping pains, obstinate sickness and the presence of whitish shiny stools streaked with blood and passed with great frequency, and tenesmus, and the fact that these stools were extremely offensive, quite unaccompanied by dysenteric collapse and formed the commonest symptom observed, all appeared to point to this cause. This year, within a fortnight of embarkation, I weighed every coolie, and then administered santonin to each emigrant above two years of age, which produced 989 round worms. The largest number produced by any individual was thirty-seven, but I have good reason to suspect that large numbers escaped my tally, both in the preliminary sea-sickness which attacked the entire shipment and also from their belief that a second dose of medicine would be the inevitable result of such a confession. Allowing a two months' interval to elapse, I again weighed every coolie on board the ship, and I was able to prove a net increase of 2420 lb., which, taking 110 lb. as a fair average weight for an adult, represented twenty-two extra labourers on board. This result, though doubtless due to the generous dietary provided by the Colonial Governments in some part, may, I think, be not unfairly attributed to the fact that this large number of round worms had been expelled which would otherwise have caused grave interference with the digestive functions and prevented the due assimilation of food products. In conclusion, I would mention that in one case, a child aged two, who died, no symptom save debility could be discovered, and upon making a post-mortem examination a round worm was discovered in the small intestine, but no further evidence of visceral disease.

I am, Sirs, your obedient servant,

PERCY RENDALL, M.D.

Devonshire Club, St. James's, S.W., Nov. 28th, 1892.

"MEDICAL AID ASSOCIATIONS."

To the Editors of THE LANCET.

SIRS,—I have always been disinclined to enter on a newspaper controversy, which as a rule results in so little good, but I cannot allow the assertions of Dr. Leslie Phillips and others to pass unchallenged. As to the working of medical aid associations in other towns I know nothing, but I must emphatically deny that the Manchester United Friendly Societies' Medical Association, of which I am one of the surgeons, trade on the services of their medical officers and make a profit out of their work. The published report and balance sheet of that Association for last year show a balance to their credit of £14 9*s.* 2½*d.* (no interest at all having yet been paid on money borrowed for fitting up surgeries &c.)—not much of a profit for twelve months' work. I am confident that the first use to which a larger balance will be put will be to increase the salaries of their surgeons (in the case of one this has already been done unasked) or to lighten their work by opening another surgery, thus dividing Manchester into four districts instead of three, as at present. No canvassing for families is carried on here, the only eligible ones being those of members of one of the societies forming the Association, and as far as I have been able to see the only reason for combination is the benefit of the members, as under the present system they obtain the services of a medical man who devotes himself entirely to attendance on them, and with whom the question of expense does not arise, he being able to obtain anything necessary for their efficient treatment for the asking. Looking at the matter from the club's point of view, I quite agree with this. Medical men admit that the remuneration from clubs is too small to expect proper attendance, and from my experience as an assistant—which has been extensive—I should not care to be treated as a club patient in the usual way. No profit is made out of our attendance on midwifery; the whole of such fees, together with those for vaccination and reporting infectious cases, belong to the surgeons. Further, no "covering" of unqualified men can occur, as there are no assistants.

I entirely fail to see in what way my conduct can be considered "infamous in a professional respect." Nothing could be more contrary to my intentions, and when it is shown that I am acting in any way derogatory to my profession I will resign without any coercion from the Medical Council, who will, I feel sure, first consider many other matters really disgraceful to the profession of medicine before they are induced to interfere in this. There can surely be nothing wrong in my preference of an appointment worth almost double that of an ordinary assistancy, or in being responsible to a lay committee and paid by them. The medical staffs of all hospitals are controlled in like manner, and the appointments to large works, collieries and unions are held under both such conditions. So far I have been treated with every consideration, and am perfectly uncontrolled so long as my duty is done towards the sick members; and I certainly cannot be dismissed without three months' notice, unless for gross misconduct. I honestly believe I am practising my profession in a perfectly honourable and legal manner, and am free from the jealousy and ill-will found amongst my medical brethren in private practice, caused by the struggle to obtain patients. At any rate, I prefer my present position to running a sixpenny dispensary, or a private club (admission fourpence per family per week), or acting as assistant to another man, working like a slave, entirely for his interest and profit, for a mere pittance, and having one's opinion and treatment regularly and unceremoniously set aside and the impression conveyed to patients that an assistant is altogether an inferior being; or if perchance he should become too popular, some excuse for dismissal is soon found, and this to a married man is a serious matter, all chance of a livelihood in the same neighbourhood being quite out of the question through the terms of a stringent agreement. I should also be glad to know in what way my attendance on a number of united clubs differs from that of any other medical man on a single one, the contribution per member for the medical attendance being exactly the same in each case. Naturally I should, in common with most men, prefer a lucrative private practice, but to a young medical man without means this at the outset is impossible; but in simple justice, judging by my own treatment so far by a medical association, he might do worse than accept one of their appointments, which, with stated surgery hours, rules as to the sending of messages, holidays &c., is in some respects preferable to private work.

I am, Sirs, yours faithfully,

Manchester, Oct. 24th, 1892. VERNON MOSSMAN.

To the Editors of THE LANCET.

SIRS,—Brevity is so important to us all that I must ask you to excuse me if I imitate, in a minor degree, the curtness of such succinct phrases as "systematic robbery" and "grotesque indecency," and request my opponents to translate my terse expression into more diffuse and polite language. Most of the letters of the malcontents are simply nonsense. Here is a quotation from one of them: "He [the surgeon] is the *paid servant* of some person or persons not connected in any way with the medical profession. This is a most undignified and indefensible position." Thus this correspondent, in order to prove his own conduct infamous, calmly insults the medical staff of the Army, the Navy, the Poor-law Unions, County Councils, and many other bodies. The next sentence in the same letter accuses me of incompetency because (not having capital) I cannot get a larger income in private practice than I have at present. I confess I can produce no reasoning which could make an impression on this gentleman, and I therefore pass by his three letters without further notice. Another correspondent asks me to master the facts in the case of the gentleman who received *only* £250 a year after five years' service, though the writer must know that the officer referred to was paid much more than the "market value" of medical men with such, and so recent, qualifications. If the advertisements are an index the L.S.A. of recent standing can be employed for £60 a

year, in-doors, and I have not heard of one who would sneer at the larger salary named. The subject is unpleasant and I quit it with pleasure, even to point out the remarkable mistake of another writer who speaks of the associations as "charitable institutions," the very thing they are not. He goes on, indeed, to propose that when all expenses have been paid the members should offer the rest of their pence to the surgeon; but whatever future claim such actions may give them to be considered charitable they have none at present. One of our opponents estimates the applications for a vacant appointment on our staff at forty, another at fifty, and they thus expose the baselessness of all the talk about our salaries being "miserable pittances," our condition "servitude" and our employers "sweaters." This one fact, that we are envied by a body of medical men at least forty or fifty times as numerous as ourselves, shows beyond dispute that if we are badly paid, enslaved and "sweated" by our employers, a vast number of qualified men must be treated still more badly by their employers. Why, then, waste sympathy on us, when we are, comparatively at least, well off? At the same time, if there are any better positions to be had, we shall be glad to hear of them, and, if we can get them, we shall, I promise, resign our present appointments in a body. None of your correspondents have succeeded in framing a definition of "covering" which would include us and exclude the man who takes up a deceased brother's practice on condition of sharing the proceeds with the widow, or him who buys a practice with borrowed money and goes shares with the money-lenders. If any financier will advance me £2000 on my guaranteeing him half the net profit of the practice I should buy, I shall be delighted to become working partner in the firm thus formed, and so, I do not doubt, would many of my opponents. And now I turn to Dr. Phillips' statements, which are like the talk of one thinking aloud, flinging among us half-formed ideas which he has never criticised himself nor expected anyone else to criticise. Take the assertion that the medical officer does all the work and earns all the income of the Association. Work is done for it by herb collectors, farmers, miners, merchants and drug millers, by the labourer and his men, by the dispenser, by those who have built the surgery &c., by the secretary or collector, by the committeemen (who see that each official does his duty), and by many others. The Association, needing the product of their labour, pays for the work they have done, and, needing also a doctor, pays him. The assertion that the latter does the work of all the others deserves to be met with a burst of laughter. Take next the statement that the Associations practise. Ten thousand men and women and 4000 babes in Northampton are solemnly declared to carry on a medical practice, and the medical officers are said to "cover" or conceal the nefarious doings of this army of unconscious quacks. Comment is needless. Take, then, the assertion that "the privilege of practising medicine for gain does not exist without the licence," and think of all the unqualified assistants, all the prescribing chemists and all the herbalists. Remember that the law prevents *no one* from practising for gain. Take, next, the insinuation that a qualification has no value if laymen can invest money in practices, and call to mind that it is the qualification which makes them prefer us to quacks, and that in the clerical profession the laymen do *all* the buying and selling, the clergyman being obliged to swear that he has not paid and will not pay for the advowson, and yet the clerical "qualification" has not lost its value. Dr. Phillips wastes a column in describing an imaginary prospectus which "could be drawn" by a company which "may" be formed, when a moment's reflection would have shown him that he was not dealing with the question at issue. Are we justified in acting as we do? That is the question; and the assertion that if we are justified certain others would be so is totally irrelevant. More than another column is devoted to declaring the difference between "combination" and "coöperation," as if we cared which word was employed. Bishops may combine and burglars coöperate, and the suggestion that the one word has a baser meaning than the other is not supported by any lexicographer or philologist. The idea of restricting the meaning of an English word—the derivation given is not quite correct, by the way—because of the meaning the Romans attached to certain similar words would be unworthy of a third form schoolboy. In reply to the statement that the Aids do not abolish middlemen, I beg to point out that medical men employing assistants are middlemen, and of the worst description, as they intercept over three-fourths of their assistants' earnings. The Aids, as I explained in a previous letter, supply the assistant with an equivalent for capital, and, besides providing him with all that is required for carrying on a practice (which a private practitioner has to pay for himself), give him a salary. Nearly the whole income is spent in this way, a very small sum being usually put by as security for the stability of the Association. The Medical Defence Union itself is a "legal" Aid Association, the lawyers doing much more of its work than we do of the Aid's, and receiving only one-third of the income. The Union saves, pays rent, and employs other servants than its professional men, just as do the Associations, but while the latter pay their lay officers only 4 per cent. of the receipts, the former pays its secretary and clerks 8 per cent. The comparison is made closer by the fact that, though the Union sneers at the Aids as "trading companies," it describes itself, in a report now before me, as "a business company and not a learned society." The most baseless of all Dr. Phillips's assertions is that the Aids pay "as a rule from one-fifth to one-third of the income" to their medical officers. It appears from the reports, which are said to "substantiate" this statement, that they pay "as a rule" from 40 to 50 per cent.—a larger proportion than most medical men can devote to absolutely private purposes, and that no Association pays so little as one-fifth. May I ask its author to withdraw this erroneous assertion? I have no time now to show the worthlessness of the remedies mentioned, but if the surplus is to be divided among a portion of the Association's servants, of course the members will take care that there is no surplus; and the suggestion that we should derive profit from having the supplying of drugs in our hands strengthens the impression that the "club doctors" gave cheap drugs in improperly small doses. In conclusion, I wish to say that I think this attack is made on us at the instigation of the general practitioners, who wish to become "club doctors" once more, and to force us to serve them (for £60 in-doors) as of old. Hoping that this letter may induce your other correspondents *to think* on the subject, and cease to rush into print with raw opinions and impossible suggestions,

I am, Sirs, yours truly,

Nov. 28th, 1892. VERAX.

*** We have received an overwhelming amount of correspondence on this subject. We do not propose, however, to insert any more letters for the present, the matter having been referred by the General Medical Council for consideration by a committee —ED. L.

DEATHS UNDER CHLOROFORM.

To the Editors of THE LANCET.

SIRS,—A patient aged fifty-seven was admitted to the infirmary on Nov. 9th, 1892, under the care of Dr. Carter, suffering from ascites, which was thought to be complicated by a tumour (? cystic) in the right pelvic region. The patient's consent having been obtained, it was decided to operate, and for this purpose she was transferred to Mr. Jordan Lloyd. On Nov. 12th, the heart having been examined, and being to all appearances healthy, chloroform was administered on a piece of folded lint. (Chloroform was given in preference to ether because of an asserted liability to pulmonary trouble.) The patient took the anæsthetic perfectly well and was in no way excited, respiration continuing evenly and deeply at normal rapidity up to the time when the skin incision had been made, when quite suddenly and without warning she became livid, made two or three shallow gasps, and breathing ceased. The heart was examined instantly and no sounds could be detected. The pupils were not dilated, being about a line in diameter. The tongue was well forward between the teeth during the administration. The head was lowered over the end of the table and artificial respiration, both by Silvester's and Howard's methods, commenced, but no air could be made either to enter or leave the chest. Insufflation of the lungs was tried by the mouth without effect; tracheotomy was then performed and insufflation again attempted through the tube, but without effect. Heart puncture made within a few minutes of the onset of alarming symptoms showed the cardiac muscle to be absolutely inactive. At the post-mortem examination the cardiac condition was not such as could be recognised by auscultation, there being no valvular lesions; nor was the condition of the heart muscle such as could have affected the duration and tone of the first sound in any marked degree.

Chloroform from the same bottle had been administered to a case by me on the previous day, and was given to another patient afterwards without any disturbing effect. The amount administered in this case was not accurately measured, but could not have exceeded half an ounce; and the patient was completely, but by no means deeply, under when the alarming symptoms arose. I am inclined to believe that respiration and circulation ceased simultaneously; but I am of opinion that the symptoms were due to respiratory cessation, aided by the upward displacement of the diaphragm from the abdominal fluid, the heart's cessation being secondary. I would call particular attention to the following—(1) The normal size of the pupils; (2) the position of the tongue; (3) the sudden development of the condition; (4) the lividity of the face throughout in the entire absence of obvious signs of laboured breathing; (5) the early arrest of the heart's action, as discovered by auscultation and puncture; (6) the complete failure from the first to make air enter or leave the chest by any artificial methods. I may add that during a fair experience of anæsthetics, both in the hands of others and myself, I have never known alarming symptoms come on so suddenly and all efforts from the first prove so absolutely futile; and this case, in my opinion, lends support to the view, now so commonly held, that in the vast majority of cases of death under anæsthesia respiratory failure plays the leading part.—I am, Sirs, yours obediently,

F. MORTIMER ROWLAND, M.B. Cantab.,
Resident Medical Officer, City Infirmary.

Birmingham, Dec., 1892.

To the Editors of THE LANCET.

SIRS,—It is a far cry from you to where I am writing, but after waiting in vain for some more doughty champion of chloroform to appear, especially one from the Edinburgh school, I venture to raise my feeble voice, impelled thereto by what seems to me only just and fair to the merits of this useful servant of our profession, but one which appears liable to become decidedly unruly in use, and unusually fatal to our unhappy patients. I take it that the conclusions of the Hyderabad Commission have settled it that the respiratory centres are the first in order to be affected, and the rule to watch the respiration is a sound one. I make bold to broadly lay it down that there are two classes, and two only, where death occurs under the use of this anæsthetic, and these classes are — (1) unsuitable cases, and (2) unsuitable apparatus.

1. *Unsuitable cases.*—As regards these I opine that we are all agreed that they consist of those where some organic disease of the heart and lungs exists, likely to be influenced by the drug, and to these we should perhaps add any affection of the centres presiding over the circulation and respiration.

2. *Unsuitable apparatus.*—Here I have been struck by the remarkable preponderance of the use of some one of the numerous inhalers in fatal cases. It is my firm conviction that if all apparatus are carefully deposited in the lumber room, out of the reach of the scientific mechanic, we would be gratified by a decided decrease in the number of deaths reported. Roughly speaking I think it will be found on an analysis of every case of death from chloroform narcosis that where death has not been the outcome of organic disease, the existence of which was unascertained, unsuspected or overlooked, it has been the result of the use of some inhaler or other. For my part I have ever since my student days used the folded towel applied over mouth and nose, ensuring a due admixture of air with the vapour. If ever I did have recourse to any other method I soon saw reason to return to the time-honoured, simple and useful towel or napkin folded crosswise. Keeping this towel well before the nose and mouth I keep my eyes upon the respiratory movements and regulate the administration accordingly. I feel as I write this that it must seem very platitudinous, as it has been urged and recommended again and again, but apparently to deaf or preoccupied ears. I have never had since a student any mishap in giving it, and I have given it to all sorts of cases, and numberless times and often, when far away from medical assistance, alone. I therefore cannot help wondering how it is that all the deaths occur which one sees recorded. As an improvement to your present heading, then, I would suggest "Deaths under Inhaler." In thus speaking of chloroform I do not of course pretend that it is any safer than ether, and do not decry the latter; but I only desire to put the saddle on the real delinquent, and in this case I am persuaded the inhaler, patent or otherwise, is to blame. The tendency of all true science is to the simplification of treatment and the methods of practice.

Hoping that this protest will meet with the attention the subject merits, though conscious of how much better a case many another could present,

I remain, yours sincerely,

Orange, Oct. 5th, 1892. G. A. VAN SOMEREN, M.D. Edin.

THE USE OF ANTISEPTICS IN THE PREVENTION OF SCARLET FEVER AND OF SEPTICÆMIA.

To the Editors of THE LANCET.

SIRS,—The abridged report in the last issue of THE LANCET of my remarks at the Harveian Society on Mr. Tait's paper on Peritonitis is apt to leave an erroneous impression, which I trust you will afford me this opportunity of correcting. Inasmuch as scarlet fever spreads from patient to patient, my experience at the General Lying-in Hospital was, as you state, analogous to that of Mr. Tait in operation cases; but I differ from him *in toto* as to the channel whereby the patients are likely to have received infection, and, consequently, the deductions to be drawn from that experience are entirely at variance with the opinions advanced by him. Mr. Tait relates how, in the days when he used complete Listerian precautions, spray and everything else, he inadvertently carried scarlet fever from one patient to eleven others, on whom he operated in succession; and, assuming that he transmitted the infection at the time of the operation by direct inoculation, he puts this experience forward as evidence against the value of antiseptics to prevent not only scarlet fever but septicæmia also. From this view I entirely dissent, and for the following reason. Scarlet fever, as is generally recognised, spreads through the atmosphere, and the poison obtains entrance to the patient's system through the respiratory passages. It is not necessary, therefore, to assume gratuitously that, because a patient has been operated upon, the poison has of necessity been introduced through the wound. The very fact that three of Mr. Tait's nurses were also infected points the finger in the right direction. On this ground I would submit that antiseptics, however efficiently employed with a view to prevent direct inoculation, would not in themselves prevent infection of the patient by scarlet fever through the ordinary channels, either at the time of the operation or subsequently. On the other hand, if efficiently carried out, they will destroy, and therefore prevent, the introduction of the poison of scarlet fever and of septicæmia through the wound. I have shown how in the General Lying-in Hospital, in which for the last eleven years the service has been conducted upon Listerian principles, though scarlet fever spread from patient to patient, septicæmia as a cause both of illness and of death had been practically eliminated; and though scarlet fever spread, septic processes obtained no hold even in the scarlet fever cases. The precautions adopted aimed at and succeeded in destroying septic matter which might otherwise be carried by direct inoculation through wounds in the genital passage; but these same antiseptic precautions were obviously insufficient, and were never intended, unless supplemented, to prevent the spread of scarlet fever and of other poisons which permeate the atmosphere and find a door of entry through the respiratory passages. This experience I have related in detail in my paper on Scarlet Fever during Pregnancy and in the Puerperal State, published in vol. xxx. of the Obstetrical Transactions.

I am, Sirs, yours faithfully,

Weymouth-street, W., Nov. 23rd, 1892. ROBERT BOXALL.

LACTIC ACID IN TUBERCULOUS ULCERATION.

To the Editors of THE LANCET.

SIRS,—The reputation enjoyed by lactic acid as a curative agent in tuberculous ulceration of mucous membranes is well borne out by Dr. Percy Kidd's interesting case reported in THE LANCET of Nov. 19th. That this drug has a curative effect in such cases must be the conviction of all who have employed it persistently and efficiently in laryngeal phthisis. Indeed, even where the laryngeal mischief is extensive and the lungs are affected, we believe that, if accompanied by sufficiently large doses of creasote, it may be applied with advantage either by means of a cotton-wool brush or in the

form of spray, the latter being, however, somewhat choking. Some time ago the probability occurred to us (as it must have to many others) that similar good effects might follow its use in tuberculous ulceration of the skin. Accordingly, without consulting any literature on the subject, we employed it in the following cases, in each of which the concentrated acid was rubbed in vigorously by means of cotton-wool wrapped firmly round a pair of dressing forceps :—

CASE 1.—A patient aged sixty-five was admitted, suffering from tuberculous ulceration of the skin of the right forearm of two years' standing. After scraping, the acid was applied as above, and, in spite of considerable pain, repeated daily for a fortnight. During this period it was noted that a portion of infected tissue had been left behind on which the lactic acid seemed to have no specific effect, and it had ultimately to be removed. It was over two months before cure was effected, and we are not satisfied that the result was any better than that obtainable by ordinary methods.

CASE 2.—A schoolgirl aged twelve was admitted, affected with lupus of the nose, extending also to the mucous membrane. In this case only the cutaneous portion was scraped and the patient made an excellent recovery. It is to be noted that on the mucous membrane the acid apparently exercised its specific effect, a fact which may be contrasted with its failure in the previous case.

CASE 3.—A servant aged seventeen was suffering from tuberculous ulceration covering the greater part of one forearm, of ten years' standing, which had been subjected during this period to various forms of non-operative treatment. After scraping, the concentrated acid was applied and continued for five weeks, when creasote ointment was substituted. This case was encouraging, its progress and the ultimate result being all that could be desired.

CASE 4.—A fireman aged thirty-two was admitted with a patch of tuberculous ulceration the size of the palm of the hand. This was scraped and silver nitrate was applied. Later lactic acid was used, and, although producing marked pain, it was continued, the patient being discharged cured at the end of three weeks. We have heard that there has been recurrence.

CASE 5.—A schoolboy aged ten had extensive tuberculous ulceration of the dorsum of one foot with outlying nodules. This, after scraping, was treated throughout with lactic acid, the application of which was, as in the other cases, accompanied by pain. The patient was in hospital over four months, during which further scraping became necessary, and once more, although a cure was finally obtained, we were unable to detect any special advantage in the use of lactic acid.

The result has been on the whole disappointing, for while it leaves untouched the old dictum that there is but one satisfactory treatment in such cases—a thorough scraping—lactic acid evidences no superiority over caustic potash or chloride of zinc as an after application.

We are, Sirs, yours truly,
W. NEWLANDS CLEMMEY, M.R.C.S.
JOHN BIERNACKI, M.B. Glas.

Bootle, Nov. 21st, 1892.

BOYCOTTING IRISH QUALIFICATIONS BY LONDON HOSPITALS.

To the Editors of THE LANCET.

SIRS,—From your report of the last meeting of the Irish Graduates' Association I see that they have set themselves a Titanic task, inasmuch as they hope to get Irish qualifications their legitimate recognition by the governors of London hospitals. The following facts will prove this, being the experience of one who had the audacity to appear before one of these august corporations: In June last your columns contained an advertisement for an assistant surgeon to a large London hospital; for this appointment I was one of several candidates, and in due course appeared before a court of governors of that hospital. To my utter astonishment I was asked by the chairman why I applied for such an appointment, not having obtained the F.R.C.S. Eng. In reply, I stated that there were no such conditions in their advertisement, which led me to believe that monopoly had been done away with by them, as it had been at Hastings and Bristol. This simple statement seemed to stimulate this gentleman to add insult to injury by stating that there was no chance of any surgeon with an "inferior" qualification being admitted to their hospital; that their tendency was to uphold the higher qualifications, and that if I wished to aspire in the future to one of their appointments, I must obtain the F.R.C.S. Eng., which I suppose is the higher college referred to, but whose new cognomen puzzled me for the nonce. Notwithstanding his provocative speech I suppressed my ire and humbly pointed out that his valuation of my fellowship was not in accordance with that of the Select Committee of the House of Lords, which seemed to surprise him—so much so that he offered to go into my application instanter, which I declined with thanks. Twenty years hence this fossilised condition of affairs will be interred with its guardians; but in the meantime those of us who are capable of, and have an ambition for, hospital work in London cannot hope for any relaxation from these gentlemen, judging from the above experience, which speaks for itself. The only alternative open is, with the help of philanthropic Irishmen, to establish a St. Patrick's Hospital in London, manned by Irish surgeons and physicians, on such a large and generous basis as that we may hope to have for consultants such distinguished Irishmen as Sir Richard Quain and Sir William Mac Cormac, and in the administration and work done in this hospital prove *practically*—"which is all that a generous English public requires"—that we Irish graduates are as worthy of their confidence as English ones, only asking "a fair field and no favour." I am, Sirs, your obedient servant,

ROBERT O'CALLAGHAN, F.R.C.S.I.

Carlow, Nov. 24th, 1892.

TALIPES EQUINO-VARUS AT THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

To the Editors of THE LANCET.

SIRS,—The somewhat abrupt conclusion, owing to the lateness of the hour, of the debate on Mr. Edmund Owen's paper at the Royal Medical and Chirurgical Society, when only three Fellows had spoken, must be my excuse for addressing these observations to you. It is not to be denied that in a certain proportion of cases of congenital club-foot relapse does occur after what Mr. Owen calls the orthodox treatment, either from neglect or from faulty growth. Even such cases can, in my experience, all be brought into a good position by subcutaneous tenotomy and myotomy and the use of instruments, but it is not always easy to maintain the improvement. In two such cases at the National Orthopædic Hospital I have performed what is known as Phelps' operation with encouraging results. My father, Dr. W. J. Little, long ago stated as his opinion that congenital club-foot could not be too early operated on. I am glad to hear that Mr. Owen adopts this view. If seen early enough and the after treatment be carefully carried out, even the most severe case may be rectified without even using a Scarpa's shoe or other elaborate appliance. Whether Phelps' operation or tenotomy only be done, the foot must be held in a good position until it has grown into it. Mr. Owen spoke of the pain caused by the "orthodox treatment." No splint or shoe need be applied so as to cause pain or the subsequent formation of sores. A visit to the wards of the National Orthopædic Hospital would convince anyone that the treatment can be carried out without pain. Subcutaneous surgery is one means (as Mr. Hulke pointed out) of maintaining asepsis, and is surely a simpler and more certain way of doing so than the most rigid antiseptic precautions. Is it, then, an anachronism? Where the one method is inapplicable we need not, thanks to Listerism, hesitate as in former days to make an open wound; but it can never be good surgery to divide any structure needlessly. The foot that has been cured by tenotomy and gradual methods has its functions less impaired than that which has undergone a radical operation involving opening of joints and probable division without hope of repair of the internal plantar nerve; but the latter is obviously a better foot than one in the condition of equino-varus. There are other points of interest raised by Mr. Owen which considerations of space forbid me to touch upon.

I am, Sirs, yours faithfully,

Seymour-street, W., Nov. 23rd, 1892. E. MUIRHEAD LITTLE.

"'CAISSON' WORKING IN BLADDER SURGERY."

To the Editors of THE LANCET.

SIRS,—As I was unfortunately unable to be present at the Medical Society on Monday, Nov. 14th, when Mr. Fenwick read a short paper with the above-mentioned title, perhaps,

you will allow me to add that I have employed an almost exactly similar plan in several instances and fully endorse its applicability to certain cases. The only way in which my operation differed from his was that I have usually sponged out the speculum instead of sucking it dry.

I am, Sirs, yours obediently,

Harley-street, W., Nov. 22nd, 1892. W. BRUCE CLARKE.

THE INTERNATIONAL CELEBRATION AT PADUA.

(FROM OUR SPECIAL CORRESPONDENT.)

NOMINALLY to commemorate the tercentenary of Galileo's epoch-making lectures in this august seat of learning, but really to embody the gratitude of modern science for one of the most eventful occasions in its history, the *feste*, which begin on Dec. 6th and conclude on the 8th, have already attracted the interest and in several cases even the actual presence of the votaries of inductive research all the world over. Medicine in particular will be honourably as well as numerously represented at the celebration. She has not forgotten the place that Padua holds in her annals. There it was, to go no farther back, that Fabrizio Acquependente made the discovery embodied in his treatise, "De Ostiolis Venarum," a discovery which had the most signal effect in enabling his four years' pupil, Harvey, to put his mighty inductions on the irrefragable ground of demonstrated fact and to silence the censorious detraction of would-be vindicators of less worthy claimants. A list, indeed, of the British graduates who left the halls of Padua to diffuse its teaching and its practice throughout Christendom would fill a portly volume, and if that list dwindle down to inanition by the middle of last century it was for the reason that the pupils began to excel the mistress, or at least to transfer her doctrines and methods to other centres of education, scientific and professional. Not that she had ceased to vindicate even then and long afterwards the proud position she had held before and after the Renaissance. With pathologists like Morgagni, and with anatomists like Scarpa, she shed a light on medical teaching and practice whose lustre is hardly dimmed at this day, and if in the struggle for disenthraldom from a foreign yoke she had to slacken her zeal for pure science and professional training, she is, now that the goal of a united Italy is attained, making up for the time she sacrificed and the opportunities she had to ignore, and will ere long assume her traditional *rôle* of leader among the Lombardo-Venetian, and honourable competitor among the Italian universities.

Preparatory to the detailed account of the proceedings, which I will send next week, I can now, through the courtesy of the organising committee, present an outline of their tenour. The Minister of Public Instruction will represent the Government at the celebration—Signor Ferdinando Martini. On the 5th there will be a reception, on the part of the Paduan students, of the students of other universities, and of those of the other institutions for the higher professional instruction throughout the peninsula. Delegates from British and other seats of learning or medical schools will also be warmly welcomed and hospitably entertained. On the evening of that day a grand choral festival will inaugurate the reception in the Sala della Ragione. On the 6th the Senatus Academicus and subordinate staff will receive the delegates of other institutes and cities, who will thereafter be presented to the civic authorities of Padua. This will be followed by a visit to the various monuments and points of historic or academic interest within the walls and neighbourhood. The University Rifle Brigade will hold a competitive trial of skill by shooting at the target, and the day will close with a grand festival, in which the students will act as hosts, in the Sala della Ragione. The 7th will be memorable for the commemoration of Galileo in the academic Aula Magna, on which occasion will be presented the *gonfalone* (standard) wrought by the ladies of Padua for the University. This will be followed by the speeches of the day, delivered by the Rector, Professor Ferrari, and by the Commendatore, Professor A. Favaro, after which will be unveiled the commemorative tablet, duly inscribed for the occasion. A "Spettacolo di gala" will be given in the evening at the Verdi Theatre. On the 8th a *cortège* consisting of all the students attending the academic and other educational institutions of the city, and of the civic authorities and the other guilds and corporations, will patrol the city, to lay crowns on the monument of Galileo in the Piazza Vittorio Emanuele. After this a grand fencing tournament will be held by the students, to be followed by a reception given by the Town Council of Padua. The day and the proceedings as a whole will be concluded by a great festival of the students in the Sala della Ragione.

The arrangements, already in progress for some weeks, promise a most successful celebration, of which my next letter will give an extended report.

Padua, Nov. 28th, 1892.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The Jaffray Hospital.

THE 28th of November was the seventh anniversary of the opening of this hospital by the Prince of Wales. A concert and fireworks testified to the event, after which cheers were given for the founder, who was unavoidably absent.

A Temporary Terror.

Some of the officials of the General Hospital were lately thrown into a state of alarm by the escape of a small patient aged eleven. This precocious boy, who was under massage treatment for an injured arm, was heard to object strongly to the process, and to declare that he would drown himself. One night, during the brief absence of the nurse on duty, he disappeared. The canal was dragged, the telephone set to work, and for some hours no tidings of the fugitive could be ascertained. Meantime he had run nearly three miles in his nightshirt and slippers to the house of a relative. The question of responsibility was thus considerably lessened, and the institution resumed its ordinary routine.

Death from Football.

A fatal accident from the effects of a kick during a football match on Nov. 27th was the cause of an inquest at Worcester. The Rev. G. H. Knight, one of the assistant masters at Bromsgrove College, during the game was accidentally kicked by an opponent. He subsequently complained of his head; a doctor was called in, who thought that he would be better after a night's rest. On the following morning he was found dead in bed. The necropsy showed a large clot of blood from a ruptured vessel upon the brain. Unfortunately these accidents are not infrequent, and the manner in which the game is often played gives opportunities for injury which may lead to disastrous results; but the risks seem only to stimulate the players and to heighten the interest of onlookers.

Nov. 30th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Natural History Society of Newcastle.

A LEGACY of £2000 has been received by the hon. treasurer of the Natural History Society from the executors of the late Mr. John Coppin of Bingfield, Northumberland, who had bequeathed this sum towards the maintenance of an efficient curator for the museum of the Society.

A New Scientific Society.

A new scientific society has been formed in Newcastle, having for its object the pursuit of certain branches of microscopical research, some of which have been comparatively neglected. By the regulations every member is expected to devote himself to a particular line of investigation and to mount as many slides illustrative of his work as will enable him to give one to each of his colleagues on the occasion of the monthly meeting. It has been a common complaint at our microscopical meetings that the members do so little microscopical work.

Gateshead.

The medical staff of the Gateshead Children's Hospital have presented a report to the committee on the overcrowded state of the wards. The hospital was commenced on a very modest scale, but such is its utility that it was very soon

filled, and must ere long be very considerably enlarged. There should be no difficulty in doing this in a large and prosperous town like Gateshead. The Gateshead guardians, like others, have agreed to grant certain quantities of tobacco and snuff to deserving inmates of the workhouse, and I hear that this humane decision has given much satisfaction to the ratepayers.

The late Dr. Heath of Newcastle.

I have seen a very fine portrait of the late Dr. Heath as President of the Durham College of Medicine in the gallery of Messrs. Mawson, Swan and Morgan, of this city. It has been painted by Mr. C. Kay Robertson after the fine and well-known picture by Mr. G. W. Joy. It shows Dr. Heath in his D.C.L. robes, and it has been inspected by numerous members of the profession. There is also shown in the same gallery (published by special permission of the executors) a very fine autotype reproduction of the original picture by Mr. Joy. Those who wish to obtain copies of it should apply early, as the issue is limited and it is not published for profit.

Death of a distinguished Colonial Surgeon.

Mr. Daniel Robertson died last week at his son's residence in Gateshead. The deceased occupied many important positions. In 1864 he was appointed surgeon of McCarthy's Island, Gambia, on the West Coast of Africa. Previously he was Colonial Surgeon of Bathurst and Colonial Secretary in 1848; he also served as Queen's Advocate and Judge of the Court of Common Pleas, and acted some time as Governor of the same place; but his most distinguished service was when he volunteered his services as surgeon on board H.M.S. *Curlew*, the surgeon, nearly all the officers, and two-thirds of the crew having died of yellow fever.

Cumberland.

The water-supply of Penrith has occupied the consideration of the local board of health, and much correspondence has passed between the board and Mr. G. F. Deacon, the engineer of the proposed waterworks, and Dr. Stevenson, of Guy's Hospital, who concludes his report as to the surrounding waters by pointing out "that the difficulty felt in determining what scheme to adopt was simply an embarrassment arising out of the riches about Penrith in the matter of the water-supply." The cost of the schemes, he further said, was low in relation to the quantity and quality of the water, and, whichever was ultimately adopted, he felt satisfied that Penrith would be in the possession of one of the best supplies in the kingdom.

Death of the Cumberland Centenarian.

The death of the Cumberland centenarian, Mr. Thomas Moffat, is announced at the advanced age of 102 years, 3 months and six days. He was originally a weaver, and his apprentice indentures, dated Aug. 3rd, 1802, are still preserved and attest his great age. Up to a couple of years ago Mr. Moffat had uninterrupted good health. The deceased was interred at Wigton.

Newcastle-on-Tyne, Dec. 1st.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Entries at the Dublin Medical Schools.

THE entries for the anatomical classes for the session, according to the official returns, are as follows:—

Trinity College	181
Royal College of Surgeons	178
Catholic University	116
Total	475

As compared with last year there is an increase of 1 in the Catholic University, a decrease of 28 in the College of Surgeons' School, and a decrease of 50 in Trinity College. As regards the last-named institution there is no first-year's class owing to recent rule. This makes a decrease of 77 in the three schools as compared with the returns in 1891, which to some extent may be explained by the five years' curriculum coming into operation on Jan. 1st last. Going back as far as 1889 I find that the total entries that year were 635, showing that in three years the numbers have diminished by no less than 160, or about one-fourth of the total.

Dublin University Biological Association.

The opening meeting of the Association was held in Trinity College last week, presided over by Dr. Macan. Dr. Beatty, president, delivered an address on the subject of the Functions of the Glands of the Skin. He stated in the course of his observations that he had made exhaustive experiments on numerous animals and arrived at the conclusion that he could not accept Dr. Unna's theory in reference to the sweat glands. A vote of thanks was passed to the lecturer for his address.

Transactions of the Royal Academy of Medicine.

The tenth volume of the Transactions of the Academy has now been issued to the Fellows. In the Section of Medicine there is an excellent paper by Dr. W. G. Smith on Recent Advances in the Etiology of Diseases of the Skin and their bearing upon Treatment; while Dr. Tweedy has, in a paper on the Diagnosis and Treatment of Diseases of the Stomach, described the instrument devised by Dr. Einhorn of New York, and which he has styled a "stomach bucket." There are papers on the Treatment of Typhoid Fever, by Drs. Boyd and Beatty; and a Case of Typhoid Relapse, by Dr. J. Moore. In the Section of Obstetrics there are Notes of a Case of Ruptured Uterus (recovery), by Dr. P. J. Barry; and an interesting communication by Dr. Atthill, on Dilatation of the Uterus, and the Treatment of some of the Commoner Forms of Uterine Disease. Dr. Cosgrave, in the Section of State Medicine, discusses the Control of Inebriates; and Mr. Flinn has a communication on Some Modern Methods of Sewage Treatment. There are other papers which I hope to refer to on another occasion.

Cork Hospital Saturday.

By additional subscriptions this fund has reached a total of £853, and this was allocated last week to various Cork charities, nearly half the entire amount being divided between the North and South Cork Infirmaries. Last year it may be mentioned the fund came to £600.

Royal College of Surgeons.

The Fellowship has been obtained by the following—viz., D. P. Coady (Naas); C. J. Lyons (British Honduras); and F. T. Newell (Dublin).

The late Mr. William Colles, F.R.C.S.I.

The many friends of the late Mr. Colles will be glad to learn that the medical profession are having a memorial portrait painted by Mr. W. Osborne, to be placed in the board room of the Royal College of Surgeons, Dublin. Subscriptions, limited to one guinea, should be forwarded to the Honorary Treasurer, Colles' Memorial, Royal College of Surgeons, Dublin.

Belfast Board of Guardians: Resignation of Medical Officers.

We are at present in the throes of a stiff medical contest in Belfast owing to the resignation of two of the medical officers of the Belfast Workhouse, which took place on Nov. 29th. One of these—Dr. Seaton Reid, the father of the medical profession in Belfast—is now in his eighty-sixth year, and has been an officer in the Poor-law service for forty-six years. Dr. Reid, who was formerly Professor of Materia Medica at Queen's College, held the office of physician to the Belfast Fever Hospital (which is under the Poor-law Board), and from the great experience which he acquired there obtained a very high reputation as a consultant in fevers and in all acute diseases. The second medical officer, who resigned on the same day—Dr. Brice Smyth—was visiting medical officer to the Union Hospital, and had charge of the Maternity. He has been for thirty years an officer of the Board of Guardians. Both these appointments are worth £150 per annum, and there is a keen competition for them, the following being candidates:—Dr. E. C. Bigger, Mr. Hall, Dr. McCullagh, and Dr. Killen. At the Board of Guardians meeting on Nov. 29th the services of Dr. Reid and Dr. Smyth were spoken of in the highest terms, and it was decided to grant them a superannuation allowance to be finally settled at a future meeting.

Queen's College, Belfast.

I understand that the Lord-Lieutenant has written, through his secretary, to the President of Queen's College, expressing his strong approval of the proposed students' union, and intimating his intention of subscribing £25 to the fund.

The Belfast Charitable Society.

At the annual meeting of the Belfast Charitable Society, held on Nov. 29th, Dr. Richard Purdon, visiting physician, in his medical report which was submitted, refers among other matters to the severe visitation of influenza at the

institution towards the end of last year, which caused fifteen deaths—a not unnatural result considering the great age of the old people in the charity, and that many of them were affected with chronic ailments of the chest, heart &c. In February of this year a complete change in the nursing arrangements was made, and this has already brought about an improvement in the cleanliness, comfort and health of the patients. The dietary has also been improved, a greater variety of food being given. Dr. Purdon states that there is much want of additional accommodation for the sick and infirm patients, at least six extra beds in each of the male and female infirm and hospital wards being required.

Belfast Nurses' Home and Training School.

The annual meeting of this deserving medical institution was held on Friday, Nov. 25th, the Countess of Shaftesbury presiding, when a very satisfactory report was presented, and special thanks were given to Dr. Calwell, Dr. Strafford Smith and Professor Sinclair for their services at the home.

Mr. David Turner has been presented by the patients and nursing staff of the Royal Hospital for Incurables with an illuminated address and a gold watch on the occasion of his retirement from the post of resident medical officer to that institution.

At Waterford Petty Sessions Mrs. Poole was fined £5 for compounding a medical prescription, not being entitled to do so.

Nov. 30th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

A Singular Medico-legal Case.

AT a recent meeting of the Société de Médecine Légale an interesting communication was made, on behalf of Professor Cazeneuve, on a singular case of infanticide involving a somewhat unusual medico-legal problem. It was a question concerning an infant of five months which had died suddenly in 1891 without showing any previous symptoms of disease. At this time there was no suspicion of crime, and it was only owing to certain rumours, sixteen months later, that the police took action and caused the body to be exhumed. The chemical analysis for traces of arsenic, lead, mercury and other poisons came to nothing. However, further research led to the discovery of eight small pieces of an elastic blackish-grey substance blocking up the intestinal tract. After repeated washings and careful examination these were recognised as portions of sponge, and M. Cazeneuve was of the opinion that the ingestion of these fragments of sponge was the cause of death. In support of this opinion he cited the custom which obtains in certain country districts of killing stray dogs and predatory cats by placing in their way small pieces of sponge soaked in grease, which, upon being swallowed by the animals, become swollen in the intestinal canal, after the manner of a sponge tent and thus induce fatal obstruction. Founding an opinion on these considerations, and also taking into account the fact that the portions of sponge presented a well-defined cut surface, the medical jurist concluded that circumstantial evidence was established that the child was caused to swallow the pieces of sponge in a vehicle such as milk or soup. The jury also took this view, with the result that the accused was sentenced to penal servitude for life.

Poisoning of a Prison Physician.

A curious but luckily not fatal poisoning accident recently befell the medical officer of Beauvais prison. It appears that for some time the prisoners suffered from some inexplicable malaise, and suspecting the pharmaceutical extract of walnut leaves, which it seems is the practice to add to the prison drinking water, the medical officer, instead of having recourse to experiment on the lower animals, resolved to try the diluted extract upon himself, with the result that he almost sacrificed his life. About five minutes after taking the mixture he experienced a sense of great heat at the epigastrium, extreme dryness of the throat, dimness of vision and weakness in the limbs. Poisoning was at once suspected and energetic remedies adopted, with the result that in three days he was able to resume duty and to open an inquiry into the cause of his misfortune. It was then found that the druggist who had the prison contract for the supply of drugs, had, through a mistake on the part of his pupil, sent extract of belladonna for extract of walnut leaves. The druggist was hereupon indicted before the Correctional Tribunal of Beauvais, condemned to prison for six days and fined 100 francs.

Hysteria after Ovariotomy.

M. Debove, at a recent meeting of the Medical Society, recorded the case of a patient aged thirty-eight who had the uterine appendages, including both ovaries, removed in 1889. The result was in every way satisfactory from an operative point of view. In June, 1890, however, the patient had an hysterical attack for the first time, followed by several subsequent attacks. Her medical history previously to the operation contained no record of any hysteria. When examined by M. Debove there was well-marked hemi-anæsthesia, with "ovarian" pain on pressure, the latter exciting a fresh attack. The iliac pain, moreover, was readily transposed by a magnet. The point, however, that the communication was intended to emphasise was that the ovariotomy did not prevent the occurrence of hysteria or even of the manifestations generally known as "ovarian."

The Medical Practitioner and the Concierge.

Medical men on your side of the Channel hardly realise what their *confrères* on this side have to contend with. In England a man reckons, it is said, his home his castle; in France he has to reckon first with his *concierge* or hall porter. A case illustrating this is recorded by a Montpellier paper. A medical man having changed his address, his former *concierge* persistently refused to give his new address to the patients who came to request it. An appeal to the landlord, whose servant the *concierge* alone is, not mending matters, our *confrère* summoned them both before the local tribunal. Here it was elicited that the amiable janitor, aggrieved on the usual grounds, made answer to all inquiries for the doctor—"Unknown," "Gone without leaving address" &c. The court very properly held that such behaviour was fraught with prejudice to our *confrère's* interests, and fined the *concierge* and landlord £40 with costs.

Paris, Nov. 30th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Professor Leyden on Professor Pettenkofer's Experiment.

IN the Society for Internal Medicine Professor Leyden alluded to Professor Pettenkofer's experiment last Monday. He attached great importance to it. He thinks that the strict adherents of the bacteriological theory are too dogmatic and one-sided. The measures taken against cholera had been one-sided too, aimed as they were mainly at the destruction of cholera bacilli. In this endeavour people had gone so far as to regard cholera patients mainly as media of cholera contagion. Such patients and even persons suspected of being such patients had had their personal rights quite inhumanly interfered with. Professor Leyden reminded his hearers that something similar had taken place in the case of tuberculous patients after the discovery of the tubercle bacillus in 1882.

The Cholera Epidemic in Russian Poland.

The Prussian Commissioner for the basin of the Vistula published on the 23rd inst. the following statistics of the cholera epidemic in Russian Poland. In three days the Government district of Radom had 24 cases and 8 deaths, Lublin 14 and 12, Siedlec 42 and 30, and Lomza 16 and 4.

Scientific Publications.

The 157th number of the "Collection of Scientific Lectures," edited by Rudolf Virchow and Wilhelm Wattenbach, contains an essay by Robert Franceschini of Vienna entitled "Biology as an Independent Science." Dr. Behring has published a book entitled "The Therapeutic Serum of Tetanus and its Application to Patients."

Berlin, Nov. 28th.

MEDICAL MAGISTRATE.—Thomas J. Henry, L.R.C.P., L.R.C.S. Edin., Government Medical Officer for the district of Warialda, New South Wales, has been placed on the Commission of the Peace for the colony of New South Wales.

UNIVERSITY OF CAMBRIDGE.—The first part of the third examination for degrees of M.B. and B.C. will be held on Dec. 13th, 14th, 16th, 17th and 19th; the second part on Dec. 13th, 14th, 15th, 16th, 17th, 19th and 20th. The examination for the degree of M.C. is fixed for the 16th, 17th and 19th inst.

Obituary.

WM. LINDOW DICKINSON, L.R.C.P.LOND., M.R.C.S., J.P.

BY the death on Nov. 20th of Mr. Wm. Lindow Dickinson, in his seventy-third year, there is severed not only from the town of Workington but also from a very large surrounding district a medical connexion which has been preserved in unbroken succession for nearly a century. Beginning practice in Workington about the early years of the present century, Mr. Dickinson's grandfather laid the foundations of a practice which extended wellnigh through the whole west of Cumberland, and which was recruited from time to time, first by Mr. Dickinson's father and uncle, and later by the introduction of the late Mr. Peat, who was associated with the deceased gentleman till some fifteen years ago, when Mr. Peat died and Mr. Wm. Lindow Dickinson retired in a great measure from active practice. In these days of railways, telegraphs, telephones &c., it is no easy matter to thoroughly estimate the great difficulties or the vast amount of hard work which the carrying on of such a practice entailed, but the high estimation in which those services were held by such a large section of the community was in itself convincing testimony of the conscientious way in which these duties were performed and the high professional skill which was at command. In this work, up to the time of his retirement, the deceased gentleman took a large and active part, bringing to bear upon the practice of his profession a mind singularly well informed, an experience ripened by his early training and a judgment at once accurate and keen. It was to these qualities, combined with a personal charm of manner, that Mr. Dickinson owed much of his success; and it is not at all astonishing that he succeeded in gaining from his patients a confidence and esteem such as it is given few men to enjoy. Nor, with all the work which came to his hands, did he neglect to keep himself thoroughly well read in all the current medical literature of the day. The study of physiology especially found for him great and absorbing interest—an interest which he maintained till the day of his death. It was doubtless to the meditative and thoughtful mind which the pursuit of this study brought to Mr. Dickinson that the medical world is indebted for the honour which belongs to him of having been the first person to diagnose trichinosis in the living subject in England. The whole matter was fully dealt with by Dr. Spencer Cobbold in the Cantor Lectures delivered in April, 1871, when the services which Mr. Dickinson had rendered to science were fully recognised. He was a typical specimen of the old family practitioner, courteous, cautious, dignified and refined, beloved by his patients and of a kind and generous nature, which tended to make his presence in the sick room particularly pleasing. In his relations with his fellow practitioners, while ready at all times to place his long experience and skill at their disposal, he yet closely adhered to the best traditions of the profession, and would never allow his name to be associated with anything that was not consistent with the strict rules of high professional practice. Until a few days before his death he had been in his usual health. On the evening on which he died he had just finished tea when he was seized with an attack of angina pectoris and passed away almost before his sorrowing family could come to his assistance. Mr. Dickinson was buried at St. John's, Workington, the funeral being attended by a large number of friends and professional brethren; and not a few of the old townspeople with whom he had so long been associated felt as they stood at the grave that they had lost in the person of Mr. Dickinson one who through life had shared much of their sorrow and who had always been to them friend and counsellor of no ordinary kind.

MICHAEL FOX, L.A.H., L.M.

WE regret to have to announce the death of Mr. Michael Fox, which occurred at Claycross, Chesterfield, on Nov. 6th, from enteritis. The deceased was well known and esteemed amongst the teachers and students of Dublin, with whom he was an especial favourite. He practised in Longford for some time, and while there he gained the admiration of numerous patients and friends; but through ill health he was obliged to relinquish his practice and travel. He took voyages to India, Australia, and to North and South America. Believing he had sufficiently recovered, he again settled down to practice, but it proved too much for him. He was only thirty-three years of age, and was one of three brothers belonging to the medical profession.

Medical News.

HUMANITARIAN LEAGUE.—A meeting of members and friends of the Humanitarian League will be held at the Wheatsheaf Restaurant, 13, Rathbone-place, Oxford-street, W., on Monday, Dec. 5th, at 8 P.M., to urge the need of abolishing private slaughterhouses and of substituting public abattoirs under direct municipal control. Dr. B. W. Richardson will take the chair, and an address will be given by Mr. H. F. Lester, Honorary Secretary of the London Model Abbatoir Society.

MR. HUBERT M. WOOD, who has for some time past held the post of senior resident medical officer at the Royal National Hospital for Consumption, Ventnor, was on Nov. 15th presented by the staff, patients and employés of the institution, with a handsome illuminated address and valuable carriage clock, on the occasion of his resignation, as a recognition of the sincere regard in which they held him and of the deep regret they felt at his departure. Dr. Cyril Lewis, the new resident medical officer, made the presentation.

FOOTBALL CASUALTIES.—During a match at Aldershot between the Medical Staff Corps and the Northampton Regiment, on Nov. 19th, a private of the A Company, Northampton Regiment, fractured his leg and was admitted to the Cambridge Hospital.—A young man of Crewe playing in a match at Nantwich on Nov. 23rd, received severe internal injuries, and lies in a precarious state in that town.—On Saturday, Nov. 26th, whilst playing at Worcester for the Bromsgrove Rugby Club against Worcester, a player received injuries from which he died on the following day.—Also on Saturday last the captain of the Liverpool Caledonians, in the course of a Lancashire League match against South Shore, at Blackpool, sustained a compound fracture of the leg and was admitted to the Northern Hospital, Liverpool.—A youth aged sixteen died at the Haileybury College, Hertford, on Saturday last, from internal injuries received in a game on the previous Thursday.

THE NATIONAL DENTAL HOSPITAL.—The annual dinner of the staff and the past and present students of this hospital and college was held on Nov. 25th at the Holborn Restaurant. Sir James Crichton-Browne presided, and was supported by many distinguished members of the dental profession and others. In proposing "Success to the National Dental Hospital and College" the chairman said no one could venture to predict what degree of development odontological science would reach in the course of a few decades. It was advancing in public estimation year by year; and a qualified dentist ought to have a seat on the General Medical Council. For the rapid development of dentistry the profession was greatly indebted to Dr. Cunningham, who had shown how necessary it is that an examination of the teeth of school children should be made from time to time. Mr. Roughton and Mr. Harry Rose replied to the chairman's address, and after other toasts had been proposed and responded to, the meeting separated.

VOLUNTEER MEDICAL STAFF CORPS.—The annual competition for the Challenge Shield took place on Saturday, Nov. 26th, at the Head Quarters, 1st Middlesex Rifle Volunteers. Nos. 1, 2 and 4 companies competed. The judges were Surgeon-Major A. E. Hayes, D.S.O., secretary to the Surgeon-General at the Royal Victoria Hospital, Netley, and Surgeon-Captain Pope, the Netley adjutant. Surgeon-Major Hayes declared No. 1 company, commanded by Surgeon-Captain Valentine Matthews, to be the winners. He said that the way in which the different competing companies went through the various movements in company and stretcher drill, showed great credit both to officers and men of the corps, and it also showed that the adjutant and instructor must have worked hard to bring men up to such a high state of efficiency. All the companies drilled remarkably well, but he had never seen such perfect drill as that of No. 1, the winning company; they all moved as one man, and there was not a single mistake. Surgeon-Colonel A. J. Norton and the officers of the corps entertained the judges at mess at the Holborn Restaurant in the evening. The commandant, Surgeon-Colonel A. J. Norton, the adjutant, and all the officers were present at the competition, together with a number of friends.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ANDREW, F. W., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Hendon Local Board.

CONNOR, D., L.R.C.S., L.M. Irel., has been appointed Government Resident Medical Officer and Public Vaccinator for the District of Victoria Plains, Western Australia.

COSENS, W. B., L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Surgeon to the Taunton and Somerset Hospital, vice Liddon.

DEANE, JOHN E. J., L.R.C.P. Irel., L.F.P.S. Glasg., has been appointed Health Officer for Rutherglen, Victoria, Australia.

ELGEE, W., L.R.C.P. Lond., M.R.C.S., has been appointed Resident Medical Officer at the Colonial Hospital, Perth, Western Australia, and Assistant to the Superintendent of Vaccinations, vice Sloman, resigned.

ESLER, A. W., M.D., M.Ch. Irel., has been appointed Health Officer for McIvorshire, Victoria, Australia.

FLEMING, ALEX. A., L.F.P.S. Glasg., has been appointed Public Vaccinator for the District of Otepopo, New Zealand.

FLEMING, H. H., M.B., B.Ch. Dub., has been appointed Public Vaccinator for St. Arnaud, Victoria, Australia.

GARDNER, HAROLD, Mr., has been appointed House Surgeon to Charing-cross Hospital.

HOUSE, F. M., L.R.C.P. Lond., M.R.C.S., has been appointed Resident Medical Officer and Public Vaccinator at Katanning, Western Australia.

LATIMER, H. A., M.R.C.S., has been appointed Senior Surgeon to the Swansea General Hospital, vice Thomas, retired.

LAWSON, G. L. L., M.R.C.P., D.P.H. Edin., M.R.C.S., has been appointed Government Medical Officer and Vaccinator for the District of Brisbane Water, New South Wales.

LONGDEN, F. R., L.R.C.P., L.R.C.S. Edin., has been appointed Health Officer for Buninyong, Victoria, Australia.

LYS, HENRY GRABHAM, M.D. Lond., M.R.C.S., has been appointed Medical Officer for Out-patients to the Royal Victoria Hospital, Bournemouth.

MCCARTHY, HENRY, L.R.C.S., L.M. Irel., has been appointed Health Officer for the District of Tatura, Victoria, Australia.

MUIR, ROBT. D., L.R.C.P. Lond., M.R.C.S., has been appointed House Physician to Charing-cross Hospital.

PENNY, H. JAS., L.R.C.P., L.M., L.R.C.S. Irel., has been appointed Health Officer for Port Fairy, Victoria, Australia.

POTTS, WALTER A. B., M.R.C.S., has been appointed Public Vaccinator for Harrow, Victoria, Australia, and Health Officer for Kowreeshire, E. R., Victoria.

PULLIN, F. B., L.R.C.P. Edin., L.F.P.S. Glasg., has been appointed Health Officer for Flinders and Kangerong Shires, Victoria, Australia.

RANSOME, H. F., L.R.C.P., M.R.C.S., has been appointed Honorary Assistant Medical Officer to the Manchester Hospital for Consumption and Diseases of the Throat.

REED, HENRY A., L.R.C.P., Lond., M.R.C.S., has been appointed Medical Officer of Health for Hamilton, Tasmania.

REID, GEO M., M.D. Edin., L.R.C.P. Lond., M.R.C.S., has been appointed Health Officer for Mount Alexandershire, Victoria, Australia.

REID, GEO. MARR, M.B., M.S. Aberd., has been appointed Public Vaccinator for Cobden, Victoria, Australia, vice Ewing, resigned.

ROBERTS, SIDNEY JOHN, L.R.C.P. Lond., M.R.C.S., has been appointed one of the Resident Surgeons to the Birmingham General Dispensary.

ROLLASON, A., L.R.C.P. Lond., M.R.C.S., has been appointed Health Officer for Templestowe Shire, Victoria, Australia.

SECCOMBE, S. H., M.R.C.S., has been appointed Public Vaccinator for the District of Ivanhoe, New South Wales.

SHELLS, W. F. M., L.R.C.P. Lond., M.R.C.S., has been appointed Government Medical Officer and Vaccinator for the District of Billgrove, New South Wales.

TEICHELMANN, E., L.R.C.P. Irel., F.R.C.S. Eng., has been appointed Assistant Health Officer at Port Adelaide, South Australia.

THOMAS, J. T., L.R.C.P. Irel., L.R.C.S. Edin., has been appointed Medical Officer for the Magor Sanitary District of the Newport (Mon.) Union.

TURNER, J. A., M.B., C.M. Edin., has been reappointed Medical Officer of Health for the Combined Sanitary Districts of Leicester and Rutland.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index.)

BELGRAVE HOSPITAL FOR CHILDREN, 79, Gloucester street, S.W.—House Surgeon. Board, lodging, fuel and light found.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—Assistant House Surgeon. Salary £50 per annum, with apartments and board.

BOOTLE BOROUGH HOSPITAL.—Assistant House Surgeon and Dispenser. Salary £40 per annum, with board, lodging, and washing.

BRECON INFIRMARY.—Resident House Surgeon, unmarried, and also to undertake Dispensing. Salary £70 per annum, with furnished apartments, board, attendance, fire and gas.

EDMONTON UNION.—Medical Officer for the district of Winchmore-hill. Salary £25 per annum, and 20 per cent. thereon in lieu of payment for expensive medicines, with extra fees (in Midwifery 10s. per case) prescribed by the Orders of the Local Government Board. (Apply to Mr. F. Shelton, the Clerk, 806, High-road, Tottenham.)

FARRINGDON GENERAL DISPENSARY, Bartlett's-buildings, Holborn circus, E.C.—Resident Medical Officer. Salary £100 per annum, with apartments and attendance.

FISHERTON ASYLUM, Salisbury.—Assistant Medical Officer. Salary £100 per annum, with board, lodging and washing.

HOLBORN UNION.—Assistant Medical Officer at the Infirmary, Archway-road, Upper Holloway, N. Salary £100 per annum, with board, lodging and washing. (Apply to the Clerk to the Guardians, Clerk's Offices, Clerkenwell road, E.C.)

HOSPITAL FOR WOMEN (THE LONDON SCHOOL OF GYNÆCOLOGY), Soho-square, W.—Clinical Assistants.

NOBLE'S ISLE OF MAN AND GENERAL HOSPITAL AND DISPENSARY, Douglas, Isle of Man.—Resident House Surgeon; unmarried. Salary £100 per year, with apartments, gas, coal and laundry free.

NORTHUMBERLAND COUNTY LUNATIC ASYLUM.—Assistant Medical Officer in the asylum, unmarried. Salary £120 per annum, increasing £10 a year up to £150, with furnished apartments, board and lodging.

OWENS COLLEGE, Manchester.—Junior Demonstratorship in Physiology and Histology. Annual salary £100.

ROYAL CORNWALL INFIRMARY.—House Surgeon, unmarried. Salary £150, with furnished apartments, fire, light and attendance.

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields, E.C.—Senior House Surgeon. Salary, with board and residence, £75 per annum.

ST. ANDREW'S UNIVERSITY, UNIVERSITY COLLEGE, Dundee.—Demonstratorship of Anatomy. Salary £120 per annum.

STOCKPORT INFIRMARY.—House Surgeon. Salary £100 per annum, with board and apartments.

Births, Marriages and Deaths.

BIRTHS.

EADES.—On Nov. 29th, at Carr-street, Ipswich, the wife of S. O. Eades, L.R.C.P., of a son.

EMERSON.—On Nov. 12th, at Cloringbold, Broadstairs, the wife of Dr. P. H. Emerson of a daughter.

EMMETT.—On Nov. 26th, at Woodville, Kingston-road, Portsmouth, the wife of Richard Emmett, M.R.C.S., L.R.C.P. Lond., of a son.

EVIL.—On Oct. 8th, at Broken Hill, New South Wales, the wife of Frederick Claude Evil, M.R.C.S., of a son.

JACKSON.—On Nov. 25th, at Carrington, Wootton-gardens, Bournemouth, the wife of Basil Jackson, M.R.C.S., L.R.C.P., of a daughter.

JARDINE.—On Nov. 28th, at Lichfield-gardens, Richmond, Surrey, the wife of James Jardine, M.B., of a son.

MILWARD.—On Nov. 23rd, at Agra, the wife of Surgeon-Major Milward, of a daughter.

SUTTON.—On Oct. 19th, at Beenleigh, Queensland, the wife of Mr. Alfred Sutton, J.P., of a son.

TATHAM.—On Nov. 24th, at Halesowen, Worcestershire, the wife of Ernest J. Tatham, M.D. Cantab., of a son.

MARRIAGES.

FLANAGAN–LOFTIE.—On Nov. 17th, at St. Mary's, Cadogan-street, Terence Woulfe Flanagan, M.B., &c., third son of the late Right Hon. Stephen Woulfe Flanagan, of Fitzwilliam-place, Dublin, to Margaret Hester Wentworth, only daughter of the Rev. William J. Loftie, of Sheffield-terrace, Kensington.

HILLIER—FULLER.—On Nov. 30th, at High Garrett, by the father of the bride, T. Ernest Hillier, M.A., M.B. (Cantab.), Paddington Infirmary, son of the late Thomas Hillier, M.D. Lond., F.R.C.P., to M. Burnet Fuller, daughter of Robert H. Fuller, M.A., High Garrett, Braintree.

WHEELER—BUSHE.—On Nov. 24th, at St. Jude's Church, Southsea, by the Rev. F. W. B. Dunne, LL.D., Rector of West Thorney, uncle of the bride, assisted by the Rev. J. Blake, Vicar of the Parish, Humphry J. Wheeler, M.D., youngest son of Thos. Wheeler, Esq., J.P., of High Wycombe, to Emmeline Alice Augusta, eldest daughter of George D. Bushe, Esq., of Wilton, Bray, Ireland.

WILLIAMS—PASCOE.—On Nov. 17th, at Kenyon Chapel, Solon-road, Brixton, S.W., John W. Williams, L.R.C.P., of New-cross-gate, to Eleanor Philippa, youngest daughter of the late Thomas P. Pascoe, Esq., of Camberwell.

DEATHS.

FRANKLIN-LLOYD.—On Nov. 25th, at Reigate, T. Franklin-Lloyd, M.R.C.S., L.S.A., aged 47.

HILL.—On Nov. 22nd, suddenly, at St. Helier's, Jersey, Surgeon-Lieut.-Colonel Henry Walter Hill, Bengal Army, aged 42.

LAY.—On Nov. 21st, at Cairo, Surgeon-Major Peter Goodall Lay, Bengal Army (Retired).

PALMER.—On Nov. 24th, at his residence in Great Yarmouth, Frederick Palmer, F.R.C.S., in his 80th year.

ROBERTSON.—On Nov 24th, at Granville House, gateshead-on-Tyne, the residence of his son, Daniel Robertson, L.R.C.S. Edin., late Colonial Secretary and Acting Governor of H.M.'s Settlement, Bathurst, West Coast of Africa, aged 73.

SHEPARD.—On Nov. 27th, 1892, at Ty Cornel, Usk, Mon., Alexander John Shepard, M.R.C.S. Eng., L.S.A., aged 77.

TAYLOR.—On Nov. 24th, at 202, Earl's Court-road, South Kensington, Michael Waistell Taylor, M.D., F.S.A., late of Hutton Hall, Penrith, in his 69th year. (Friends are requested to accept this the only intimation.)

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages and Deaths.

Medical Diary for the ensuing Week.

Monday, December 5.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays, at the same hour.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; and on Tuesday, Wednesday, Friday, and Saturday at the same hour.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M.; and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2 P.M.; Thursday, 2.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.; and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M. Eye Department, 2.

CENTRAL LONDON THROAT AND EAR HOSPITAL (Gray's Inn-road).—5 P.M. Mr. Lennox Browne: Rhinitis, Acute, Purulent, Croupous, Hypertrophic, Hyperæsthetic (Hay Fever and Hay Asthma), Atrophic; Deformities and Deviations of the Nasal Septum.

THROAT HOSPITAL (Golden-sq.).—5 P.M. Dr. Greville MacDonald: Laryngitis, Acute and Chronic.

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Surgeon-Colonel J. B. Hamilton: Cholera, its Epidemic Progression and Causation.

Tuesday, December 6.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Skin Department, 1.45; Saturday, 9.15.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.

PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Mr. C. F. Beadles: Fibroma of Male Breast.—Mr. W. Anderson: Fibroma of Male Breast.—Mr. Dudley Cooper: Hyaline Fibroma of a Cow's Udder.—Mr. H. B. Robinson: Rodent Ulcer from Male Breast.—Mr. W. Edmunds: Fatty Tumour from the Lip.—Dr. Beavan Rake (per Mr. J. J. Clarke): Some Observations on Yawa.—Mr. J. J. Clarke: The Histology of the Yaws' Tubercle.—Mr. W. Anderson: Sarcoma of the Sterno-mastoid.

Wednesday, December 7.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1.30 P.M.; Saturdays, 2 P.M. Obstetrical Operations, Thursdays, 2 P.M.

CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M.; Thursday and Saturday, same hour.

ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M. Dental Department, 9.30. Eye Department, 2.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 30 A.M. Surgical Visits on Wednesday and Saturday at 9.15 A.M.

THROAT HOSPITAL (Golden-sq.).—5 P.M. Mr. F. G. Harvey: Syphilitic and Tuberculous Laryngitis.

OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown by Dr. Horrocks, Dr. Rasch, Dr. Boxall, Dr. Lewers, Dr. Handfield-Jones, and Dr. Amand Routh. Dr. Fredk. J. McCann and Dr. W. A. Turner: On the occurrence of Sugar in the Urine during the Puerperal State.—Dr. W. S. A. Griffith: A case of Galactorrhœa during a First Pregnancy.

Thursday, December 8.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M. Ear and Throat Department, 9 A.M. Eye Department, 2.

CENTRAL LONDON THROAT AND EAR HOSPITAL (Gray's Inn-road).—5 P.M. Dr. Dundas Grant: Affections of the Auricle.

LONDON SKIN HOSPITAL (40, Fitzroy-sq., W.)—8 P.M. Mr. Augustus Harbord: Syphilis, Acquired and Congenital.

BRITISH GYNÆCOLOGICAL SOCIETY (20, Hanover-square).—8.30 P.M. Mr. Bowreman Jessett: Twenty-five cases of Supra-vaginal Amputation of the Cervix Uteri for Carcinoma.

NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY.—Dr. D. Fairweather: Notes of a Case.—Mr. M. J. Bulger: A Case of Recovery after Perforating Ulcer of the Stomach.—Mr. J. McMunn: Remarks on some Urethral and Prostatic Diseases, and on some Novel Instruments for their Investigation and Treatment.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.—8.30 P.M. Patients and Card Specimens at 8 P.M. Dr. A. Bronner: A portable Sterilising Apparatus for Ophthalmic Instruments and Bandages.—Mr. Hartridge: Intra-ocular Growth (?).—Mr. W. T. Holmes Spicer: Kerato-Malacia.—Mr. S. Johnson Taylor: Notes on a case of probable Rupture of the Optic Nerve (patient to be shown).—Mr. W. C. Rockliffe: Notes on a case of (1) Panophthalmitis following Lachrymal Sac Affection; (2) Traumatic Ectropion treated by Tweedy's Operation.—Mr. Priestley Smith: (1) A case of Toxic Amblyopia from Iodoform; (2) A Double Model Eye for Ophthalmoscopy and the Shadow Test; (3) An Improved Model illustrating Conjugate Movements.—Mr. Robert W. Doyne: Foreign Body in the Eye.

HARVEIAN SOCIETY.—8.30 P.M. Mr. Field: The Pathology and Treatment of Suppurative Diseases of the Ear. (Second Harveian Lecture.)

Friday, December 9.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Eye Department, 2.

CLINICAL SOCIETY OF LONDON.—Dr. James Calvert: Case of Subacute Œdema of Lung occurring above a diminishing Pleural Effusion.—Mr. Bland Sutton: Case of Axial Rotation of a Wandering Spleen; Splenectomy; Recovery.—Dr. Francis Hawkins: Case of Hemiplegia in Typhoid Fever associated with Aphasia; Hæmorrhage from Bowels and Purpura.—Mr. Wainwright: Case of Fracture of Lower Jaw with Traumatic Aneurysm; Ligature of Right Common Carotid Artery, followed by Left Hemiplegia.

Saturday, December 10.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Dec. 1st, 1892.

Date.	Parometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Buib.	Solar Radia in Vacuo	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Nov. 25	30·22	E.	40	39	49	47	39	·02	Overcast
,, 26	30·20	N.E.	45	43	52	51	40	..	Overcast
,, 27	30·36	N.E.	46	44	63	50	44	·30	Cloudy
,, 28	30·48	W	47	44	52	51	44	.02	Overcast
,, 29	30·13	S.W.	50	48	57	54	47	..	Cloudy
,, 30	30·12	N.W.	40	38	68	46	38	·06	Bright
Dec. 1	30·05	W.	41	39	49	45	37	..	Overcast

Notes, Short Comments & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

COMMUNICATIONS relating to the EDITORIAL business of THE LANCET must in every case be addressed *exclusively* "To the Editors," and not to them otherwise than in their official capacity.

Inquirer.—Will our correspondent say whether there is a wage limit in his dispensary; and whether it is one of the metropolitan provident dispensaries or an independent institution; also how many medical officers there are?

A SILLY PREJUDICE.

To the Editors of THE LANCET.

SIRS,—A short time ago I was called to see a child aged two years, whom I was told was dying fast. I arrived in about thirty minutes and found the child collapsed, pulse almost imperceptible, and suffering from convulsive spasm of diaphragm. History of diarrhœa and vomiting for three days, with administration of an apple and a pint of cold milk during some slight temporary improvement on the previous day. I saw at once that the child had under present conditions about two hours to live, owing to the acute irritation which was the cause of the convulsion. So I adopted a remedy advocated by many authorities and often successfully used by myself—viz., hypodermic injection of morphia, of which I gave one-tenth of a grain. The child then slept for three hours, during which the breathing was quite easy and colour natural. After this, however, the convulsions returned, recurring about every five minutes, and despite every effort the child died asphyxiated. Owing to the injection of morphia having excited some prejudice among the uneducated class to whom the child belonged the father, I believe, expressed some dissatisfaction at the treatment, and, an officious policeman stepping in, an inquest was ordered, to find out whether the child died of morphia poisoning. This is the point about which I wish to express my strongest feeling on behalf of the profession. Surely such an annoyance, if often repeated, would paralyse medical men when called to any case *in extremis*; and although the unanimous verdict of the jury gave the cause of death according to my certificate, such an action is likely to prejudice many minds against one of the most valuable remedies in the hands of the profession, besides having been altogether frivolous and unnecessary.—Your obedient servant,

November, 1892. E. C. S.

EXPERIMENTS ON LIVING ANIMALS.

The Editor of the "Verulam Review."—With much of what our correspondent writes us we are entirely in sympathy, and it may be observed that almost the whole of the suggested conditions—at least, such as are at all practicable—are at present carried out. The Home Secretary may, whenever he thinks fit, call upon an experimenter to give an accurate report of all experiments done by him; and, as a matter of fact, the inspector calls for reports or inspects the records at frequent intervals. The nature of each experiment, with operation involved, is most carefully defined by the Home Secretary on every licence given, and printed forms are supplied gratis to each holder of a licence, and on these all experiments must be carefully and accurately entered together with the kind of animal experimented on and the date on which the experiment is performed. As regards anæsthetics, we may point out that the amount of the anæsthetic used could not possibly give any indication as to the depth of the anæsthesia induced or of the time during which this anæsthesia was maintained. We are therefore of the opinion that the conditions required to be conformed to by the Home Secretary form a really very comprehensive and efficient safeguard against cruelty, and along with those made compulsory by the inspector are fully as stringent and wide reaching as those suggested by our correspondent.

Africanus asks—"Will any gentleman who has recently passed the examination for the M.D. Durham for practitioners kindly give a brother medical man living in a colony some idea of the text-books necessary for reading for the examination, length of time required for reading, nature of practical examination in hospital and also of the extent of the *viva voce* requirements?

Alpha.—The fees are quite reasonable, and especially those for the London journeys. It is desirable that the charge for medicines should be as low as their cost price and the trouble of dispensing warrant. Practically this is the case in our correspondent's system.

A MODE OF PRESERVING VACCINE LYMPH.

To the Editors of THE LANCET.

SIRS,—Perhaps you may find room in THE LANCET, for the benefit of your readers, for the following formula for preserved vaccine lymph, which I have used for one year with satisfactory results. Vaccine lymph, five minims, best glycerine and distilled water, of each five minims. For the lymph select a healthy child with four plump vesicles, puncture without drawing blood, and transfer to minim measure with capillary tube; then add preservative and mix. The lymph, by the admixture, appears to clear at once and become bright-like sample enclosed, and preserved in April of this year. Adventitious particles rise to the surface in gelatinous nodules and are easily removed. Lymph so preserved retains its fluidity and ensures absorption. I treat all vaccine lymph in this way before using it, and with generally good results. It produces good plump vesicles and less tendency to premature areola. I have not had a miss since I have used it. For the distilled water hold a tumbler over the steaming spout of a kettle and a sufficiency is soon obtained. A convenient way of mixing the preservative is to take a drachm stoppered bottle with spout and divide into half-drachms with small phial; then put into it half a drachm of distilled water and half a drachm of glycerine, and mix. Then transfer lymph to Husband's capillary tubes; fill from two-thirds to three-fourths. These tubes are to be preferred on account of their quality, shape and length. They fill easily and require less heat to fuse them. A tube put into the lymph in the minim measure takes up sufficient for a charge for four vesicles. I generally use Rose's 5-needle, circular-point scarificator, which requires rotating once upon the selected places. I have just received fourth grant for successful vaccination.—I am, Sirs, yours obediently,

JAMES TILY, M.D St. And.,
Public Vaccinator (two districts), Brentford Union.

Nov. 29th, 1892.

First Aid to the Injured.—We can recommend the following as being reliable and sufficient for ordinary readers requiring information on this subject:—Osborn's First Aid Ambulance Lectures, arranged according to the St. John Ambulance course of instruction; Roberts's Illustrated Lectures on Ambulance Work. There is also a book by Surgeon-Major Martin.

L.R.C.P. Lond., M.R.C.S.E.—We can see no objection to our correspondent allowing himself to be so nominated under the circumstances.

INTRA-THORACIC AUSCULTATION.

To the Editors of THE LANCET.

SIRS,—It has been my habit for some time, whenever I have suspected œsophageal stricture or gastric dilatation, to try to elucidate the case by auscultating over the accessible gastric area while directing the patient to drink a glass of water. I fancy it has furnished me with valuable confirmatory evidence, especially in cases of dilatation.

I am, Sirs, yours faithfully,

Nice, Nov. 21st, 1892. A. W. GILCHRIST, M.D., M.R.C.S., L.R.C.P.

ST. MICHAEL IN THE AZORES AS A HEALTH RESORT.

IN a lengthy communication an esteemed correspondent calls attention to the benefit he has derived from a sojourn in St. Michael, whither he went to escape the so-called diarrhœa which had been prevalent in Madeira. The journey to the former island is described as most beautiful and the scenery picturesque in the highest degree. There are many boiling springs in St. Michael, supplying hot baths of both sulphur and iron, which have excellent curative powers. The Government of Portugal has established a large building containing sixty separate bath-rooms, which are free to all comers. Here the late Mr. John Hilton enjoyed two or three years of peaceful rest before his return to and demise in this country. The climate of the Azorean Group in general is most equable, the mean average temperature for the year being rather over 60° F.; as a consequence tropical vegetation abounds and fruits and flowers are seen and enjoyed all the year round. All the parks and gardens of the landed proprietors of St. Michael are stated to be open to visitors and the public generally. The cost of living is small, and travelling about the island is cheap. Altogether the statement of our correspondent would go to show that some classes of invalids would act wisely in selecting St. Michael as a resort during the winter months.

Sewell.—Our correspondent's supposition is very improbable. We do not see how an "unsuspecting operator" could mistake an artificially distended bladder for a "sacculated" viscus. Moreover, the question of mechanical obstruction by an enlarged prostate could easily be verified by examination. When once a coroner has decided to hold an inquest, upon information received, the corpse is in his possession, and he has the power of imposing a fine and committing for contempt any person tampering with such cadaver. If the body has been buried, it is customary to place the matter before the Home Secretary, with a request for an order for exhumation.

A Country Doctor.—Probably the system our correspondent mentions is the most convenient and suitable for the purpose. But it need not be expensive. The automatic arrangement in the system referred to may obviously be dispensed with, as the earth merely thrown by hand on the excreta in the pail beneath would give equally effectual results. The quantity of dry earth needed each time is about 1 lb. (rich garden mould is the best). Slop water should be disposed of by irrigation, or run directly off into a flowing ditch or other suitable channel.

"THE EMPLOYMENT OF COCAINE."

To the Editors of THE LANCET.

SIRS,—With regard to the question propounded by "Young Practitioner" in the last number of THE LANCET, I am justified, I think, in saying that the use of cocaine in the conjunctival affections of children is unattended by danger. At the Ophthalmic School belonging to the parishes of St. Saviour and the City of London, an institution for the retention and treatment of children suffering from eye disorders, we constantly employ solutions of cocaine varying in strength from 2 to 4 per cent., and in many instances we apply the salt itself to the conjunctiva of the lids. Such applications are made daily to the eyes of many children, often for months or years, in order to minimise as far as possible the discomfort attendant on the use of strong remedies. We have never observed bad results from cocaine thus applied to children. It may be well to emphasise the fact that cocaine itself, while freely soluble in vaseline or castor oil, is not very soluble in water (1 in about 1000). Hydrochlorate of cocaine, on the other hand, is soluble in less than half its weight of water, and is on this account generally used in the preparation of aqueous solutions. In conclusion, let me remind "Young Practitioner" that cocaine must not be used to the exclusion of those remedies without which full justice can be done to no case of ophthalmia.

I am, Sirs, yours faithfully,

Welbeck-street, W., Nov. 28th, 1892. SYDNEY STEPHENSON.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received:—*Heckmondwike Reporter, Yorkshire Post, Dorset Standard, Law Journal, Halstead Gazette, Islington Gazette, Newmarket Journal, Bath Gazette, Pembroke County Guardian, Scottish Leader, Sussex News, Mining Journal, Surrey Advertiser, Windsor and Eton Gazette, West Middlesex Standard, Scotsman, Journal of Commerce (Liverpool), Weekly Free Press and Aberdeen Herald, Hertfordshire Mercury, Local Government Chronicle, Windsor and Eton Express, Leeds Mercury, Reading Mercury, Liverpool Daily Post, Bristol Mercury, Insurance Record, West Middlesex Advertiser, West Australian (Perth), Argus (Melbourne), Lincolnshire Chronicle, Torquay Times, Australian Medical Journal, Kentish Mercury, West London Observer, Sunday Times, Oban Times, Australian Medical Gazette, Le Temps (Paris), Wigan Examiner, Staffordshire Sentinel, Builder, Devizes Gazette, Athlone Times, Architect, Keighley News, Bolton Weekly Guardian, Carlisle Express, Times of India, Norfolk Daily Standard Surrey Times, Pioneer Mail, Hereford Times, Northampton Daily Reporter.*

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Y.—Y. M. I. H.

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